

Camp Bonneville Reuse Plan

Prepared for:

***The Camp Bonneville
Local Redevelopment Authority
(LRA)***

***Prepared with the assistance of:
Otak, Inc.***

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(2nd revision 15 November 2005)***

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List of Acronyms

ADA	Americans with Disabilities Act
BOCC	Board of County Commissioners, Clark County
BRAC	Base Realignment and Closure Commission
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DNR	Department of Natural Resources, State of Washington
DOD	Department of Defense
DOE	Department of Ecology, State of Washington
EA	Environmental Assessment
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosive Ordnance Demolition
FBI	Federal Bureau of Investigation
HUD	Department of Housing and Urban Development
LETC	Law Enforcement Training Center
LRA	Local Redevelopment Authority
NPS	National Parks Service
OEA	Office of Economic Adjustment, Department of Defense
RPC	Reuse Planning Committee
USFWS	U.S. Fish & Wildlife Service
UXO	Unexploded Ordnance

PROJECT PARTICIPANTS

Camp Bonneville Local Redevelopment Authority

Board

- Commissioner Betty Sue Morris, Chair
- Commissioner Mel Gordon
- Commissioner Judie Stanton

Reuse Planning Committee

- Commissioner Judie Stanton, Chair
- Darrell Badertscher, Parks Commission Chair
- Vaughn Lein, Planning Commission Chair
- Kim Peery, Appointed by Governor
- Pete Butkus, Department of Community, Trade, and Economic Development; Appointed by Governor

Steering Committee

- Bob Torrens, Chair (Environmental Subcommittee)
- Robert Frohs (Neighbors Subcommittee)
- Lores Barnes (Finance Subcommittee)
- Fred Elliott (Parks Subcommittee)
- Judy Noall (Education/Cultural/Facilities Subcommittee)
- Tim McVicker (Firing Range Subcommittee)

Subcommittees:

Parks Subcommittee

- Fred Elliott (Model Airplanes)
- Terradan Landchild (Orienteering)
- Frank Funk (Equestrians)
- Bob Scullen (Chinook Trail Association)
- Doug Hagedorn (Vancouver/Clark Parks & Recreation)
- Roger Peterson (Fishing & Hunting)
- Pat Erwin (Paragliding)
- Paula Freimuth (Four Wheel Drive)
- Doug Bunch (Motor Bike)
- Bob & Debbie Johnson (Paintball)
- Alice Webber (Search & Rescue Dogs)

Firing Ranges Subcommittee

- Tim McVicker (Sheriff's office)
- Sgt. Pete Boechel (National Guard)
- Paul Hudson & Bill Treseder (FBI)
- Gary Beaird (Public Firing Ranges)

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Educational/Cultural/Facilities Subcommittee

- Judy Noall (Camping)
- Noella Reasoner (Native Americans)
- Peggy McCarthy (Medical Retreat Center)
- Susan Gilson (ESD 112)
- Gary Wallace (County School Districts)
- Dave Halme (Clark College)
- Janet Renfro (Retreat Center, Amphitheatre, Arts)
- Diane Mortensen (Family/Church/Scout use of barracks)

Neighbors Subcommittee

- Robert Frohs
- Jim Skelton
- Valerie Lane
- Ernie Peto
- Janet Renfro

Finance Subcommittee

- Lores Barnes (Bank of Vancouver)
- Craig Pridemore (Finance Manager, Clark County Public Works)
- Jada Rupley (ESD 112)
- Tim Haldeman (Parks Maintenance)

Environmental Subcommittee

- Bob Torrens (Fire District 5)
- Steve Manlow (Washington State Fish & Wildlife)
- Travis Coley (US Fish & Wildlife Service)
- Rose Andrzejczak (SW Washington Health District)
- Brian Carlson (County Environmental Services)
- Joe Sunthimer (Sierra Club)
- Dean Sutherland (Clark Public Utilities)
- Marie Deschner (National Audubon Society)

LRA Staff:

Janice Davin, LRA Coordinator

Ron Bergman, Director of Public Works

**As of NOV 2005:*

Brian Vincent, LRA Coordinator

Pete Capell, Director of Public Works

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Others interested in property:

Mike Wilson, Confederated Tribes of Grand Ronde

Sonny Aalvik, Cowlitz Tribe

Additional Staff Assistance provided by:

Norm Willinger, Peggy Nelson, Brian Carrico, Glenn Lamb, Del Schleichert, Bob Higbie, Jerri Bohard, Jane Leonard, Jim Vandling, Bob Patterson, Hisako Eklove, Bob Hutton, Lianne Forney, Gerald Wood.

Pro Bono Assistance Provided by:

Barry Steinberg, Kutak Rock, Inc.

John Lynch, Plant Adjustments Associates

EXECUTIVE SUMMARY

The purpose of this report is to present the Reuse Plan for Camp Bonneville as well as document the public process, data, analysis and alternatives that were generated during this reuse planning effort. The closure of Camp Bonneville presents a unique opportunity to transform surplus military property and facilities for economic development, job creation, and public uses which will provide significant benefits to the Clark County community.

Camp Bonneville, located in the southeastern section of Clark County, Washington, is a U.S. government property selected for transfer and reuse by the Base Realignment and Closure Commission in 1995. Camp Bonneville is a sub-installation of Vancouver Barracks, which is a sub-installation of Fort Lewis, Washington. Camp Bonneville encompasses approximately 3,020 acres, which have been identified as BRAC property subject to lease or transfer, and an additional 820 acres leased from the State of Washington not included in this reuse plan.

Camp Bonneville was established in 1909 as a drill field and rifle range for Vancouver Barracks. In 1912, an appropriation was made to expand facilities at Camp Bonneville to include a target range and a road leading to the post. The 3,020 acres upon which Camp Bonneville was established, were purchased by the federal government in 1919. In addition, the U.S. Army leased 840 acres of adjacent property, in two separate parcels, from the State of Washington in 1955. Of these 840 acres, 20 acres were returned to the State of Washington in 1957. The Bonneville and Killpack cantonments were established in the late 1920's and the early 1930's. These cantonments include a total of 54 buildings and 18 additional structures, such as observation towers.

Historically, Camp Bonneville has been used as a training camp for active U.S. Army, U.S. Army Reserve, U.S. National Guard, U.S. Marine Corps Reserve, U.S. Navy Reserve, and U.S. Coast Guard Reserve units, as well as other Department of Defense (DOD) reserve personnel. In addition, the Federal Bureau of Investigation (FBI) was issued a five-year permit that will expire in October 14, 2001, for use of a handgun range the FBI constructed at the site. (This permit is subject to termination once final disposition of the site is determined).

To assist in the community-based planning effort, the Clark County Board of County Commissioners appointed a five-member Reuse Planning Committee (RPC) to oversee the reuse planning process. The RPC established six subcommittees made up of community representatives to assist in preparing planning options. Representatives from each of the subcommittees were selected by their subcommittees to participate on the Steering Committee whose job was to balance interests and findings of the six subcommittees and make recommendations to the Reuse Planning Committee.

Federal agencies were notified of the availability of property due to pending camp closure. Applications were received by the Army Corps of Engineers from the Bureau of Prisons, the US Fish and Wildlife Service and the FBI, whose application was filed after the deadline. The Bureau of Prisons and US Fish and Wildlife Service withdrew their applications, and the FBI and

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LRA are working cooperatively in this planning effort to ensure that FBI activities are compatible with the reuse plan.

The LRA mailed two notifications to all agencies serving the homeless of Clark County. Native American tribes in Southwest Washington and Northwest Oregon were also sent notifications. There was a demonstrated lack of interest in utilizing Camp Bonneville for homeless services because of its remote location, lack of nearby services, poor quality of the existing barracks buildings, high remodeling costs and high costs of replacing ailing or non-existent infrastructure.

Existing infrastructure systems were analyzed to determine the condition of roads, water systems, sanitary sewer systems, buildings and electrical systems. In general terms, roads on site are in good condition. The planned uses on site will require upgrading certain roads and the addition of others. Water systems were found to have outlived their useful lives and need replacement. Visual inspection has led to the conclusion that the existing sanitary sewage system is in severe disrepair and will require significant rehabilitation to meet environmental permit requirements. Further documentation and studies from the Army may alter this opinion. Buildings at Camp Bonneville cantonment are in fair condition, while those at Camp Killpack cantonment are in better condition having been upgraded in 1992 by the Corps of Engineers. Electrical systems can be upgraded to future uses without major cost.

The LRA Reuse Planning Committee established 7 guiding principals for planning which, in summary, required the reuse plan to be:

- Self sustaining
- Locally focused and directed
- An open process
- Considerate of impacts to the surrounding neighborhoods
- Addressed to overall community need
- Based on cooperation and consensus building
- Environmentally conservative

In addition to information provided by LRA subcommittee members, the consultant reviewed reports prepared by the U.S. Army, other federal agencies, and Clark County. Interviews were conducted with local government officials, key community representatives, Army base closure office staff, and the relevant state, regional, and local agency personnel. Market and financial feasibility analyses were conducted, as well as an evaluation of the noise impact of firing ranges on the other reuses and the surrounding neighborhood. A timber management study was also commissioned. Regional law enforcement agencies contributed funding to expand the original scope of work to include an analysis of the feasibility of developing a regional law enforcement training center at Camp Bonneville.

Reuse advocates from the local community prepared detailed business plans including information on the reuse, space and facilities required for each proposed use. These plans were reviewed by other reuse advocates and the advisory committees to identify areas of incompatibility, neighborhood impact, financial cost and benefit, and overall community need.

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Subcommittees identified areas that needed more technical evaluation. These technical studies were funded through the Office of Economic Adjustment (OEA) reuse planning grant. Throughout these studies, information obtained was shared with the Steering Committee, with information requests regularly made of subcommittee members in a cooperative process with consultant and staff.

The Reuse Plan includes the following elements:

- Regional Park
- Law Enforcement Training Center
- Rustic Retreat Center/Outdoor School
- Native American Cultural Center
- Clark College Environmental Education
- Trails and Nature Area
- FBI Firing Range
- Law Enforcement & Public Firing Ranges
- Timber Resource Management Area

The Reuse Plan for Camp Bonneville includes a balance of public recreational, educational and law enforcement activities for economic development purposes. The key revenue generating element of the Reuse Plan is a program of moderate sustainable Timber Management. The revenue from Timber Management would fund up-front site infrastructure costs for roads and utilities, and could offset site carrying costs and future regional park operations. When fully built out, the on-site uses generate a break even level of income to offset development and operational costs.

There are a number of factors, which could impact this Reuse Plan and create the need to modify this plan in the future:

- UXO reports
- Endangered and threatened species studies
- New salmon and trout regulations
- Wetlands and riparian areas delineation
- Transfer restrictions
- Zoning
- Historical evaluation
- Timber harvesting restrictions
- Water and Sewage systems studies
- Lead contamination
- Liability issues
- Safety issues
- Any additional areas of environmental contamination or concern not yet identified

The Board of Clark County Commissioners should become the implementing local redevelopment authority and should take permanent title to uncontaminated and “cleaned” base

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property determined to be safe and secured for public use*. A public advisory body, meeting quarterly, should be created among the several Camp Bonneville users and neighbors as well as the adjoining educational entities, to guide the long-term use of the land as a subcommittee of the Vancouver-Clark Parks & Recreation Advisory Committee.

** As of November 2005, the Department of Army and the LRA have both expressed interest in the pursuit of an "Early transfer". If early transfer does occur, the property is transferred prior to full clean up of the contamination. The clean-up requirement will be identified and an appropriate level of funding transferred to the LRA as part of the transfer. The LRA would coordinate the clean up efforts.*

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NOVEMBER 2005 UPDATE Summary

Since the time of the February 2003 update to this plan, Congressional legislation (10 U.S.C 2694a) has been approved, this is more closely related to the reuse plan. That legislation now permits Conveyance of BRAC properties for Conservation of Natural Resources. As this reuse plan is predominately open space and wildlife preservation (2/3 of the site), it ideally meets the intent of that legislation. The remaining 1/3, the Regional Park area, is recreational and will also serve to preserve the natural resources of the area.

Note: The re-use plan has not been altered. The original plan (1998) and the defined uses remain intact. The 2003 update provided better delineation of the reuse areas. That 2003 plan discussed the desire for an Economic Development Conveyance. This 2005 update has replaced the desire of an EDC with a desire for a Conservation Conveyance.

FEBRUARY 2003 UPDATE SUMMARY

This reuse plan has been updated to reflect adjustments to cost estimates due to inflation, to a minor extent to reflect a change in the desired conveyance vehicle (Economic Development Conveyance vs. Public Benefit Conveyance), and because more detail has been added to the reuse activities. It should be noted that No Change to the reuse activities has occurred, only more definition.

It has been at least five years since the estimates of costs were prepared. To more fully understand the cost involved with the reuse activities in present time and with the higher level of specificity, revised cost estimates were prepared for some of the development costs. These costs are reflected in Appendix F.

Due to the limited extent of this update, the majority of the text, facts and figures appear unaltered from the 1998 Draft Re-use plan. Accordingly, some references to actions and dates will be past tense. It was not the intent of this update to rewrite the document with respect to time.

Section 1.0

INTRODUCTION

1.1 Purpose

The purpose of this report is to present the Reuse Plan for Camp Bonneville, as well as document the public process, data, analysis, and alternatives that were generated during this reuse planning effort. The Local Redevelopment Authority (LRA) initially anticipated completion of the reuse plan by July 1997, which was modified to March 1998 due to a delay in approval of the Office of Economic Adjustment (OEA) reuse planning grant. This deadline was further extended primarily due to the unanticipated schedule delays in evaluating the site for unexploded ordnance (UXO). For a variety of reasons, a number of reports important to the LRA's planning process were also delayed. Some of these reports, such as the Historical Evaluation of the barracks, the draft Sewage Treatment Manual, and a preliminary report identifying some of the areas where UXO were found on the site, have become available in August 1998. Other reports, such as the Archive Search Report Addendum, and evaluations of lead in ground and surface water, have not been completed by the Army or are not yet available for LRA review.

At this writing, the final UXO report findings have not been completed. The LRA has been consistently in support of the Department of Defense (DOD) policy that recommends "that the LRA take the environmental condition of property into account in development of its reuse plan" ("A Guide to Establishing Institutional Controls at Closing Military Installations," February 1998). The revised Base Reuse Implementation Manual (BRIM), p. 2.9, also says, "It is important for the Military Department to communicate environmental issues to the LRA early in the process, to ensure reuse planning is compatible with the more significant environmental conditions that may limit certain types of land use. This way, environmental priorities can be reconciled with community reuse priorities, and appropriate cleanup levels can be established to reflect anticipated future land use." Because most of the property was identified in the Archive Search Report to have potential for UXO, information such as the UXO sampling report and subsequent Engineering Evaluation/Cost Analysis EE/CA will be critical reuse planning elements. Using information from sampling 1.1% of the property, the EE/CA will estimate the costs to "clean" the property, will identify technology available to clean the site, and will be used to prepare a timeline for cleanup and transfer. Before accepting any property transfer, the LRA will review the timeline for parcel transfer, cleanup levels proposed, and safety measures in place until all property is transferred.

Due to necessary safety precautions, evaluations have not yet been conducted to determine the presence of endangered/threatened species, or wetland and riparian areas. Nor have the areas of archaeological and cultural significance been delineated. A more detailed timber analysis also requires more extensive site access. Since the LRA has been unable to see all areas of the site (due to safety precautions), participation in Army helicopter flyovers of the site to be arranged by Fort Lewis, will be extremely valuable for the planning process.

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It is expected that this Reuse Plan will need to be modified to reflect such new information in the near future. The LRA is submitting a plan at this time to facilitate the Army's timeline for preparation of the EE/CA and the Environmental Assessment (EA). Throughout the property transfer process, as new environmental and other relevant information become available, the LRA is committed to work with the Army to modify reuse locations to better ensure public safety and minimize cleanup costs.

1.2 Scope of Study

In July 1995, Camp Bonneville was included on the list of military bases proposed for closure by the Base Closure and Realignment Commission and was approved for closure by Congress in September 1995. The closure of Camp Bonneville presents a unique opportunity to transform surplus military property and facilities for public uses which will provide significant benefits to the Clark County community.

The Camp Bonneville Reuse Plan is the result of nearly three years of coordinated effort involving the community, the Board of County Commissioners, consultants, and County staff. This Plan reflects the recognition of the importance of this opportunity to meet a variety of needs: open space preservation, natural resource management, public recreation opportunities, law enforcement training, environmental education, and community cultural activities.

Because Camp Bonneville is located entirely within Clark County and is neither part of, nor immediately bordering, any other political jurisdiction, the Clark County Board of Commissioners (BOCC) established the Camp Bonneville Local Redevelopment Authority (LRA) in August, 1995, to prepare a reuse plan for Camp Bonneville. The LRA was recognized by the Department of Defense in February 1996.

1.3 Committee Structures and Participation

To assist in the community-based reuse planning effort, the Board of County Commissioners (BOCC), as the Board for the LRA, appointed a five-member Reuse Planning Committee (RPC) to oversee the reuse planning process. The RPC included: the chairman of the Clark County Planning Commission, the chairman of the County Parks Commission, the Clark County Commissioner from the Camp Bonneville area, and two appointees by the Governor of Washington. The Governor appointed a representative from Washington State's Department of Community, Trade & Economic Development, and a former state legislator from the Camp Bonneville area.

Public hearings were held in 1995 to gather ideas from the community on reuses for Camp Bonneville. Based on these hearings, the RPC established six LRA subcommittees made up of approximately fifty community representatives to be assisted by county staff and consultants in preparing plan options. All uses proposed were objectively considered, with representatives appointed to participate in one of three "operational" subcommittees (Parks, Firing Ranges, and Educational/Cultural/Facilities). Individuals and groups expressing concerns about reuse plans

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were appointed to one of three “advisory” subcommittees (Neighbors, Finance, and Environmental). Subcommittee members proposed, researched and critiqued the range of potential reuses and evaluated reuse plan alternatives for the Community Preferred Reuse Plan. Representatives from each of the subcommittees were selected by their subcommittees to participate on the Steering Committee whose job was to balance interests and findings of the six subcommittees and make recommendations to the Reuse Planning Committee.

Representatives from the neighborhoods surrounding Camp Bonneville participated on the Neighbors Subcommittee. The Finance Subcommittee included representatives from the banking community, the County Public Works Department, Vancouver/Clark Parks and Recreation Department, and Education Service District 112. The Environmental Subcommittee included representatives from the Audubon Society, the Sierra Club, Fire District, State Fish & Wildlife Service, U.S. Fish & Wildlife Service, Southwest Washington Health Department, Clark Public Utilities, and County Environmental Services.

The Parks Subcommittee included representatives advocating equestrian and hiking trails, search & rescue dog training, orienteering, paragliding, model airplanes, paintball, fishing and hunting, four wheel drive, motor bikes, and parks. The Education/Cultural/Facilities Subcommittee participants included representatives from the county school districts, Clark College, Native Americans, camping, arts community, medical retreat center, and the Educational Service District. The Firing Range Subcommittee included representatives from the County Sheriff’s Office, the National Guard, public firing range interests, and the FBI.

LRA committees met regularly from February - June 1996 until their efforts required more technical study. The LRA received approval for a reuse planning grant from the Office of Economic Adjustment in April 1997 at which time Otak, Inc., was selected to conduct studies necessary to move forward with the reuse plan. LRA committee meetings were regularly held from April 1997 through January 1998, at which time the Steering Committee presented its preferred reuse scenario and recommendations to the RPC. Public hearings were held by the RPC in February and March 1998. Some revisions were made in the reuse scenario, which was then presented to the BOCC which held public hearings in May 1998. After additional modifications, a draft reuse plan was prepared. Approximately 80 LRA committee meetings were held from 1995-1998.

1.4 Homeless Outreach and Notices of Interest

Camp Bonneville was listed in July, 1995, for closure by the Base Realignment and Closure Commission. Federal agencies were notified of the availability of property due to pending closure on September 26, 1995, and were given a deadline of November 28, 1995, to submit applications for all or portions of the property. Applications were received by the Army Corps of Engineers on November 28, 1996, from the Bureau of Prisons and on November 17, 1995, by the US Fish & Wildlife Service (USFWS). An application from the FBI was received by the Corps on December 4, 1995.

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The application from the Bureau of Prisons to construct a prison at the site was withdrawn on March 26, 1996, after the LRA notified the agency of the local community's strong opposition to the proposal due to the proximity of a state correctional facility in the area.

The USFWS requested the entire site (with the exception of the FBI firing range) for developing a wildlife refuge. Due to concerns about reliability of funding for the new program and a desire for local management of the site, the BOCC requested that the USFWS withdraw its application to allow the local community to evaluate the site to determine the reuses that would be most beneficial for the County (with the possibility that the local recommendation would be a wildlife refuge operated by the USFWS). The USFWS withdrew its application on February 2, 1996. USFWS representatives were invited to participate on the Environmental Subcommittee and have provided valuable advice to the County throughout the planning process.

The FBI received a five-year renewable permit from the Army in 1991 (renewed in 1998) to construct a 20-25 firing point handgun and shotgun firing range on a 450' by 600' area at Camp Bonneville. Since the FBI's application for this firing range was submitted after the deadline, the LRA was initially told by the Army Corps of Engineers headquarters officials that the FBI's application would not be considered unless approved by the LRA. While supportive of the FBI's request for a firing range at the site, the LRA has expressed major concerns about safety and compatibility of continuing to locate the FBI firing range at its present site, which is less than 1/10th mile from the meadow/primary park usage area. The Secretary of the Army surplused all of Camp Bonneville with a directive to the FBI and LRA to work together to ensure that an FBI firing range will be located at the site if it is compatible with the community's reuses. In the reuse plan, an area approximately one-half mile further down range road has been identified for the FBI range, with the requirement that the range be baffled for safety and that noise buffering be added as well (conditions the FBI is in agreement with). The FBI has also been requested to use the site to meet the needs of the FBI (and not that of all regional law enforcement agencies), limiting firing range usage to its historic usage of approximately 60-80 days per year and to concentrate this usage, when possible, to the six months of non-peak park usage (October through March), with prior notification of scheduling to the County. The County recognizes that, due to emergency situations that require unplanned firing range usage, the FBI may not always be able to provide as much advanced notice for all range usage.

The March 28th deadline for declaring property surplus was extended to June 5, 1996. The notice of surplus property at Camp Bonneville was then published in the Federal Register on June 26, 1996. As required by statute, the LRA must, within 30 days of publication of the surplus notice in the Federal Register, advertise in a newspaper of general circulation in the communities in the vicinity of the property, information on the reuse process and the time periods for submitting notices of interest in the site. Ads were placed by the LRA in four local newspapers, with a deadline for notices of interest of October 21, 1996. Two workshops were scheduled at Camp Bonneville within that 90 day period (July 30, 1996 and September 5, 1996) to provide tours and additional information on the reuse process.

Federal excess application deadline
Surplus declaration by the Army

November 23, 1995
June 5, 1996

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Federal Register notice of Surplus	June 26, 1996
LRA Advertising for Notices of Interest	July 24, 1996
Deadline for Notices of Interest	October 21, 1996
On-site workshops for interested agencies	July 30, 1996 & September 5, 1996

The LRA also requested from the Department of Housing and Urban Development (HUD) a mailing list of all agencies serving the homeless of Clark County, and mailed two notifications to each of these agencies. Native American tribes in Southwest Washington and Northwestern Oregon were also sent notifications.

When the initial workshop attracted only three agencies - Clark County Community Services, Father's House, and Open House Ministries, the LRA scheduled and advertised a second workshop which was attended only by Cowlitz and Grand Ronde representatives. The LRA, in its outreach to agencies serving the homeless in Clark County contacted various agencies by phone to ensure that notice was received and to determine interest in the site. Open House Ministries was initially interested in proposing a camping area to provide interim shelter for the homeless, but determined the idea to be impractical due to the remote location and lack of services in the area. Additional ideas suggested were construction of several houses at the site for transitional housing, but no agency expressed interest in Camp Bonneville for this type of investment.

The primary reasons given for the lack of interest in utilizing Camp Bonneville for homeless services were: its remote location, its lack of nearby services, the very poor quality of the barracks buildings and high remodeling costs, and the high costs to replace an ailing or non-existent infrastructure. There is no nearby bus service nor services such as grocery stores within many miles of the site. Transportation costs into downtown Vancouver, 15 miles from the site, where most of the homeless population and subsequent services are located would be too high.

Five notices of interest were received from Father's House, Clark College, Clark County, the Cowlitz Tribe, and the Confederated Tribes of the Grand Ronde. Presentations were scheduled for January 13, 1997 at a public meeting televised by a local cable station to provide an opportunity for each agency to present its reuse interests for the site. The only application received from an agency serving the homeless was from Father's House, whose application was withdrawn prior to this meeting after it was determined by HUD that the organization did not meet HUD's criteria to be classified as an agency serving the homeless.

The goal of Father's House, was to provide an alternative living situation for children. No children had yet been served by the newly-formed organization that planned to model its program on similar ranch programs in other areas of the country. Because it was anticipated that few, if any, of these children were "homeless", because of the religious education requirements for all children participating, and because of the organization's request to function independently from the community and other reuses at the site, HUD determined that Father's House did not qualify as an agency that serves the homeless.

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The goal of Clark College was to provide students with a 50-80 acre area in the southwestern corner of the property for environmental education. Clark College also proposed construction of a three to six classroom field station at the site.

The proposals from Clark County, the Cowlitz Tribe, and the Confederated Tribes of the Grand Ronde were very similar in their proposed reuses, with the exception that firing ranges were not proposed as a reuse by the Grand Ronde. The Native American tribe applications also proposed more aggressive timber programs than that proposed in the Clark County application.

When no interest was expressed in Camp Bonneville by agencies serving the homeless, LRA staff conferred with staff from the Portland HUD office, and later with Perry Vieta, Coordinator in 1995-96 of the HUD Base Redevelopment Team, who indicated that the LRA outreach had met the criteria, and that the remote location of the site did not make it a reasonable location for homeless services. All of Camp Bonneville will be transferred for natural resource conservation, recreation, education, law enforcement, parks, with important benefits to the County. Implementation of the reuse plan may be very prolonged due to unexploded ordnance cleanup and high costs for necessary infrastructure with minimal resources. Due to the lack of interest from agencies serving the homeless, and the non-profit public benefit uses planned for the site, no homeless services are proposed at the Camp Bonneville property.

Section 2.0

CAMP BONNEVILLE REGION

2.1 Location

Camp Bonneville is situated in the southeastern region of Clark County, Washington (Sections 34 & 35, Township 3 North, Range 3 East and Sections 1,2,3 & 10 Township 2 North, Range 3 East, W.M.). The camp is located along the western foothills of the Cascades Mountain Range between Camp Hill and Little Elkhorn Mountain to the northwest, Munsell Hill to the west, and Little Baldy Mountain to the south.

Vehicular access to the main (west) gate into Camp Bonneville is provided by Pluss Road and other two-lane paved County roads. These rural roads connect to State highway SR-500 which lies to the west and south of the camp.

2.2 Surrounding Jurisdictions and Land Uses

Camp Bonneville lies within rural and unincorporated Clark County, approximately twelve miles east of Vancouver. The smaller cities of Camas and Washougal are approximately 6 miles to the south of the camp. Clark County is the fastest growing county in Washington, with a 1998 estimated population of 328,000. The City of Vancouver has the largest population in the county with a 1998 population estimated at 132,000. The 1998 population estimate for Camas is 10,300 and 7,685 for Washougal. (Population statistics from the Washington State Office of Financial Management). The nearest town is the unincorporated community of Proebstel, about 2 miles west of the installation.

The land uses surrounding Camp Bonneville are predominantly agricultural farming, rural residential, and forestry. The existing zoning of neighboring properties are FR-40 (forest zoning with a 40-acre minimum lot size), RE-5 (rural estate zoning with a minimum 5-acre lot size), and RE-10 (rural estate zoning with a minimum 10 acre lots). As Clark County has grown, so has the expansion of residential development near Camp Bonneville. Although current zoning permits nothing smaller than a five-acre lot size, many residences on much smaller lots were approved prior to the adoption of the current standards. Clark County has committed to providing off-site roads necessary to support the development of Camp Bonneville.

The northeastern boundary of the camp borders with the Yacolt Burn State Forest, which is managed by the Washington State Department of Natural Resources. The Livingston Quarry is a gravel mining operation, which also exists as an adjacent land use activity along the south boundary. Livingston Cemetery (two acres) is just south of the camp's access road and outside of the main gate along the western property boundary.

Section 3.0

SITE DESCRIPTION & INVENTORY

3.1 Site History

Camp Bonneville was established in 1909 as a drill field and rifle range for Vancouver Barracks. In 1912, an appropriation was made to expand facilities at Camp Bonneville to include a target range and a road leading to the post. The 3,020 acres upon which Camp Bonneville was established were purchased by the federal government in 1919. In addition, the U.S. Army leased 840 acres of adjacent property, in two separate parcels, from the State of Washington in 1955. Of these 840 acres, 20 acres were returned to the State of Washington in 1957. The Bonneville and Killpack cantonments were established in the late 1920's and the early 1930's, respectively, a total of 54 buildings and 18 additional structures such as observation towers.

Historically, Camp Bonneville has been used as a training camp for active U.S. Army, U.S. Army Reserve, U.S. National Guard, U.S. Marine Corps Reserve, U.S. Navy Reserve, and U.S. Coast Guard Reserve units, as well as other Department of Defense (DOD) reserve personnel. In addition, the Federal Bureau of Investigation (FBI) has a five-year permit that will expire in October 14, 2001, for use of a handgun range the FBI constructed at the site. (This permit is subject to termination once final disposition of the site is determined).

Non-firing training at Camp Bonneville involved troop maneuvers, encampments, field tactical training, and vehicle support. Vehicles used at Camp Bonneville included light and heavy trucks, occasional construction equipment, and tactical vehicles, which were limited to existing roads. Helicopters occasionally used the emergency landing strip. United States Army Engineer units used the training areas for combat and construction training, including construction and removal of barriers and limited quarrying and roadwork. Smoke and riot control agents have been used in association with field training activities (McMaster 1983).

When not required for military training activities, Camp Bonneville was made available until the late 1980's to local equestrians and hunters, and overnight usage of the cantonment areas by 4H groups, and school districts for outdoor school activities.

3.2 Site Description

Most of Camp Bonneville is comprised of undeveloped forested hillsides and creek side drainages. Former military barracks and training facilities are concentrated at two locations, the Camp Killpack and Camp Bonneville cantonment areas, which cover approximately 30 acres. Other developed facilities include firing ranges, a paved two-lane road connecting the main gate with the two cantonment areas, and a network of unpaved roads.

3.2.1 Barracks Uses

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Killpack and Bonneville cantonment areas cover a total of approximately 30 acres in area. The barracks buildings were constructed prior to 1935 as temporary structures. The majority of Camp Bonneville facilities are found at the Bonneville cantonment (30 facilities, of which two have been destroyed by fire) and the Killpack cantonment (26 facilities). A list of the facilities located at the Bonneville cantonment and Killpack cantonment are provided in *Table 1* and *Table 2*, respectively. Other structures include those associated with the firing ranges (e.g., lookout towers and shelters).

3.2.2 Firing Range Uses

The firing ranges at Camp Bonneville have been used for a variety of weapons training. At least 25 firing ranges have been identified from maps dating back to 1958, including firing ranges for small arms, large-caliber machine guns, rifles, grenades, light anti-tank weapon rockets, and subcaliber weapons. Artillery and mortar training was conducted at the installation until 1968. A summary of the range numbers, their uses and types of weapons used are provided in *Table 3*.

The firing points, firing ranges, and associated range fans and impact areas are shown on *Figure 1*. The range fans delineated on Figure 1 are believed to encompass all the components of the surface danger zone (AR 385-63), including line of fire, limit of fire, dispersion area, ricochet area, target area, impact area, and secondary danger areas. According to Army information, the area at each range in which the majority of rounds fall is generally very small compared to the full fan.

The Artillery Impact Area shown on *Figure 1*, extracted from the Archive study, is a combination (i.e., maximum area) of all artillery impact areas from maps reviewed. This area was the intended target area of artillery and mortar practice. An Archive addendum has not yet been completed or made available to the LRA.

3.3 Site Influences

3.3.1 Topography

The terrain of Camp Bonneville is generally rolling, typical of foothills of the Cascade Mountains, covered with undergrowth and large stands of coniferous timber. The west quarter of the installation consists generally of low hills and the low plain of the Lacamas Creek valley, while the remainder of the post comprises the well-dissected hills of the westernmost Cascade Mountain foothills. Elevations range from 289 feet above mean sea level (msl) at Lacamas Creek at the southwest corner of the installation to 1,000 feet above msl at the northwest, 1,350 feet above msl at the southeast, and 1,452 feet above msl at the south-central boundary of the installation. The topography is erosional except for shallow deposition in the Lacamas Creek valley (Dalan and Wilke 1981). Refer to *Figure 2*.

3.3.2 Geology and Soils

Camp Bonneville is situated on the margin of the western foothills of the southern Cascade Mountains in the transition zone between the Puget Trough and the Willamette Trough Provinces. The geology of this area generally consists of Eocene and Miocene volcanic and

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sedimentary rock types overlain by unconsolidated clays, silts, sands, and gravels of the Troutdale formation (U.S. Army 1995a).

The geology at Camp Bonneville can be divided into three general areas that correspond approximately to topographic divisions. The area west of Lacamas Creek is composed of a series of predominantly gravel and semi-consolidated conglomerate with scattered lenses and stringers of sand (Upper Troutdale formation). Underlying the Troutdale formation, and comprising the area to the north and east of Lacamas Creek, are basalt flows and flow breccia, with some pyroclastic and andesitic rocks, which are folded and faulted. The bottom land along Lacamas Creek is comprised of unconsolidated silt, sand, and gravel valley fill, with some clay. Due to the thick soil and dense vegetation, no faults have been identified within Camp Bonneville (McMaster 1983).

Soils of Camp Bonneville are mainly clayey and nonporous, so there is considerable runoff after each storm and occasional flooding of Lacamas Creek. Upland soils have mainly developed from basalt and are generally gravelly or stony and fairly shallow. Bottom land soils along Lacamas Creek tend to be clayey (Dalan and Wilke 1981). Refer to *Figure 3*.

3.3.3 Water Resources and Hydrology

Camp Bonneville lies within the Lacamas Creek watershed and drainage basin. The principal surface water feature is Lacamas Creek, which follows from the coalescence of three branch streams in the north-central part of Camp Bonneville southward, exiting the installation at its southwest corner. Numerous minor tributaries draining adjacent uplands flow into Lacamas Creek. Buck Creek and David Creek, the largest of these streams, drain the highlands to the south and east. Two artificial impoundments of Lacamas Creek, with a total surface area of less than 4,600 square feet, have been created to support a trout sports fishery (U.S. Army 1995a). One additional artificial water impoundment, an excavation area created as a result of providing berms for the adjacent 300 m firing range, has been observed on site in the vicinity of the convergence of Lacamas Creek and David Creek. However, this impoundment is not documented on existing maps.

Little information is available regarding the condition of Camp Bonneville groundwater. The groundwater flow generally follows local topography toward the south and west. A rising water table occurs in the early fall through spring during the rainy season, and a lowering of the water table occurs throughout the summer months. Two drinking water wells are located at Camp Bonneville, a 385-foot deep well at the Bonneville cantonment and a 193-foot deep well at the Killpack cantonment (McMaster 1983). Several groundwater monitoring wells associated with the sewage lagoon are located east of the Bonneville cantonment. No groundwater samples were collected from these monitoring wells as part of this work.

The LRA and the community members of the Restoration Advisory Board have been expressing concern since 1996 that the Army test ground and surface water in locations where waterways enter and leave the property. Those tests are expected to be conducted in the fall of 1998. Results of those tests must be evaluated to determine any risk of continuing firing range usage at the site.

3.3.4 Vegetation

The existing vegetation is primarily young conifer forest, although patches of mature conifer and a mix of conifer and deciduous forest is also found within the boundaries of the installation. The installation is located at the tip of a finger of prairie that reaches into the foothills of the south Cascade Mountains, although no undisturbed tracts of this habitat remain.

Coniferous forest is the predominant habitat type found over the majority of Camp Bonneville. Although most of the forests in this vicinity were once dominated by western hemlock, the regenerated stands currently consist almost exclusively of even-aged Douglas fir stands. Individual western red cedar and hemlock trees are found in scattered locations that are most often associated with drainages. Common under story species include vine maple, salmon berry, elderberry, hazelnut, salal, and sword fern. Most of the conifer stands appear to be less than 50 years old; however, patches of more mature trees are found in some areas (Pentec 1995).

Mixed coniferous and deciduous forest habitat communities are found mainly along Lacamas Creek and associated with other drainages and wetland depressions. In several areas, this habitat type is contiguous with remaining patches of Garry oak from the former woodland communities. Tree species found in this habitat type include red alder, Oregon ash, Douglas fir, big leaf maple, Garry oak, cottonwood, crabapple, and willow. Common under story species include vine maple, salmonberry, Indian plum, snowberry, and lady fern (Pentec 1995).

The U.S. Army has been managing forest land at Camp Bonneville since 1957. Forest management has consisted of scarification and replanting of lands burned during the fires of 1902, 1938, and 1951 and timber sales (Hunter 1991).

3.3.5 Rare and Endangered Flora and Fauna

In 1995, the Camp Bonneville Endangered Species Survey Final Report was completed under the direction of the U.S. Army Corps of Engineers, Seattle District. This survey was conducted by Pentec Environmental, Inc. to detect the presence of plant and animal species that are federally or State listed as endangered or threatened or are candidates for such listing and to estimate their relative abundance with the installation.

As part of this survey, information was requested from the Washington State Department of Fish and Wildlife concerning priority species. The results of the request indicate that listed resident fish are known to use Lacamas Creek in the reaches which fall within the installation boundaries, although no specific species information was provided. No other endangered, threatened or candidate species were reported to occur within or adjacent to Camp Bonneville. Information was also requested from the Washington Natural Heritage Program concerning rare plants in the vicinity of Camp Bonneville. No significant natural features or known rare plant populations were reported to occur within the installation, although two rare plants, hairy-stemmed checker-mallow (*Sidalcea hirtipes*) and small-flowered trillium (*Trillium parviflorum*), are reported to occur in the vicinity (Pentec 1995). Pentec qualifies in their report summary, however, that the

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survey does not verify the absences of endangered and threatened species, and “should not be viewed as a final determinant in management decisions.”

An on-site environmental study of the Camp Bonneville property was not a part of this reuse planning effort. Upon completion of the Army’s UXO contamination clean-up program, an inventory and assessment of rare and endangered flora and fauna will need to be conducted of the Camp Bonneville site. The reuse plan may require modification in the future should endangered species be found in higher usage areas.

3.4 Infrastructure Systems

3.4.1 Roads

Approximately a mile and a half of road within Camp Bonneville, has an asphaltic concrete pavement wearing course over an unknown depth of crushed gravel. This paved road is approximately twenty feet in width, graded to surface drain, and has been maintained in generally good condition.

Roads surfaced with crushed gravel are approximately ten to twelve feet in width with six to twelve inches of gravel surfacing. The Army estimates a total of 14 miles of graveled roads at the site, with a total of 56 miles of road and cart tracks (dirt trails) at the site. While these graveled roads and cart tracks have been well maintained by the Army in the past, they are currently in need of vegetation control and repair of culverts and areas of washout due to heavy rains over the past two years and the Army’s great reduction in maintenance levels. With proper vegetation control and localized erosion damage repairs, these roads and cart tracks can be reused for light wheeled vehicles and recreation trails after UXO cleanup procedures are completed. Refer to **Figure 4**. Maintenance of these roads and cart tracks by the Army is viewed by the community as critical due to the high fire risk at Camp Bonneville, which was part of the Yacolt Burn and two other major burns within the recent past.

The estimated cost for on-site road improvements for the Reuse Plan is \$998,000. This includes costs for repairing existing paved roads between the main entry and Camp Bonneville cantonment, constructing a new asphaltic concrete road to the location of the rustic retreat center expansion, and repairing and widening existing gravel roads from Camp Bonneville cantonment to the firing ranges.

3.4.2 Water Systems

The current water systems provides service only to the two cantonment areas. No service is provided along Range Road past the meadow area or to other areas on the site.

There are two well sites, two reservoirs, and two independent water systems serving Camp Killpack and Camp Bonneville respectively. According to Army staff, the water quality from both of these systems has passed all of the local health department requirements. Army staff have stated that the existing water systems at both camps are in poor condition.

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The Camp Killpack water system consists of a well site approximately 70 vertical feet above the camp and about 800 feet due north. This well was drilled in 1949 and is located about 50 feet from the reservoir. According to the Army maintenance staff and well reports, this well produces approximately 32 gallons per minute and fills an unlined in-ground concrete reservoir. The volume of the reservoir is approximately 1,350 cubic feet or about 10,000 gallons. According to the Army staff, this water system was inadequate to meet the needs of Army personnel during times of normal camp occupation.

The Camp Bonneville water system is pressurized by gravity flow from a reservoir located above the camp. The water pressure at the camp due to the hydrostatic head is approximately 35 psi. This system is reported by Army staff and well reports to have a capacity in excess of 100 gallons per minute. The reservoir is fed by two well sites. The original well was drilled in the late 1970's and a second well site was installed at the east end of the camp in 1978. These well sites feed into an in-ground, unlined concrete reservoir located approximately 80 vertical feet above the camp and about 800 feet due north. The reservoir was built in the late 1940's and has a capacity of about 6,900 cubic feet or around 51,700 gallons. Camp Bonneville has not experienced any water shortages according to Army personnel.

The Camp Bonneville site has valid water rights for its existing wells. These rights should be transferred to Clark County and may need to be expanded to allow facilities to meet current fire flow requirements if a local public utility water source is not utilized.

There are no fire hydrants or other fire suppression facilities existing on-site. The local county fire district is currently responsible to respond when a fire event occurs at Camp Bonneville. A fire engine of the fire district had been housed at Camp Bonneville until repeated vandalism (due to less activity at the site) caused it to be removed from the site.

The existing water systems at both camps (from the reservoirs to the buildings) have exceeded their design lives. There are two methods of correcting this deficiency. The first is to abandon the existing piping system in favor of a public utility service from Clark Public Utilities. The closest water main is more than two miles west of the site. The cost for connecting to this service has not been determined at this time. However, the construction of on-site utility corridors with 18,920 linear feet of water lines, as illustrated in Figure 10, is estimated to cost approximately \$950,000.

The second alternative is to replace the existing piping system and continue to rely on existing wells. The cost to make such improvements to the current system has been estimated at \$97,500. If existing wells are to be relied on for future uses, their flow may need to be enhanced to meet future fire flow requirements. An estimate for creation of additional well capacity has not been made because it is dependent on the depth and availability of ground water, neither of which can be determined without on-site investigation falling outside the scope of this report.

3.4.3 Sanitary Sewer Systems

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Camp Killpack and Camp Bonneville have a gravity sewer system which flows to a pump station just southwest of Camp Bonneville. Also flowing into the lift station is a two-inch force main. From the lift station, the effluent is pumped to two unlined, concrete aeration ponds located east of Camp Bonneville, with a total capacity of 3.2 million gallons. There appears to be significant inflow of ground water and storm water into these aeration ponds because they are not covered and receive surface run-off from the hill to the north. There is also concern that these concrete ponds may be cracked resulting in ground water infiltration and effluent leaching into the ground water and nearby Lacamas Creek. The Army will be conducting soil testing in the lagoon area, with results available by December 1998.

The effluent discharge system is a surface application spray system into the woods east of the ponds. This existing system does not meet current State health department requirements for year round use and will have to be either restricted to a limited time during the dry months of the summer, modified, or replaced with a new sanitary sewer system. According to the Army maintenance personnel, the existing sewer disposal system has not been operational for at least the past five years. The system has not been active because there has been little sewer inflow into the system due to the low occupancy of the camp facilities.'

The Army Corps of Engineers has been developing a reuse manual for the lagoon system. A draft of this manual was provided to the LRA in August, 1998 which will need to review the information before decisions can be made on future use of the current system. A lagoon site survey/remediation study was scheduled by the Army Corps of Engineers for Fall '97, then rescheduled for December 1998. Results of this study have been requested by the LRA and will be reviewed by the LRA prior to any final decisions by the LRA on future use of the system. The Washington State Department of Ecology (DOE) will also then be asked to further evaluate the system to determine future usability and the Army's compliance or non-compliance with any relevant environmental regulations related to continued usage or to closure. If the current system is determined (as is expected) to not be reusable, the County may not accept transfer of the sewage lagoon system, and restrooms will be constructed using septic systems. Use of composting and incinerating toilets throughout the site will also be further explored.

For planning purposes, the basic assumption is that the existing lagoon system is in severe disrepair and will require significant rehabilitation at considerable cost to meet environmental permit requirements. Construction cost allowances of \$291,250 have been made for various sanitary system upgrades. However, replacement of sanitary systems in the form of community septic facilities as a back up situation has not been evaluated at this time and is pending Army, DOE, and Southwest Washington Health District studies of the existing lagoon system. While not budgeted in the infrastructure costs for the reuse plan at this time, the construction of new on-site sanitary sewer distribution lines, in the utility corridors shown on Figure 9B, is estimated to cost approximately \$950,000.

3.4.4 Buildings

Camp Bonneville is located north of Pluss Road, approximately one mile east of the camp's main gate. This camp consists of one-story wood structures including eleven barracks, men's and women's latrine, a recreation building, storage building, kitchen and dining hall, tear gas

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chamber (scheduled for demolition by the Army), wood storage, and a recreation & barracks building. The buildings at Camp Bonneville are not in compliance with current building codes. However, these buildings could be retrofitted to an acceptable level of code compliance. The general condition of the structures at Camp Bonneville is of a lower quality than that of Camp Killpack. This is primarily due to the fact that the Corps of Engineers did not conduct a retrofit to improve this camp's building systems in 1990 as they did at Camp Killpack.

The estimated cost to bring the buildings up to required code and functional levels for the proposed reuses is \$1.3 million plus an allowance for septic system upgrades. Construction of a new multi-purpose building is estimated at an additional \$625,000.

Camp Killpack is located north of Pluss Road, approximately one-half mile east of the camp's main gate. This camp consists of one-story wood structures built prior to 1935, including nine barracks, men's and women's latrine, laundry, classroom and weight room, two shops (converted barracks), kitchen and dining hall, offices, and a fire station. According to Army staff, the Corps of Engineers undertook a retrofit of these buildings in 1990, which involved a number of structural, mechanical and electrical improvements. Although the buildings at Camp Killpack are not totally in compliance with current building codes, the preliminary assessment is that these are generally safe structures and could be used for a variety of activities similar to their historic use after appropriate upgrading. Cost to bring the buildings up to minimum ADA, fire safety and minimum building code requirements is estimated to be approximately \$313,000 plus allowances for septic system upgrades.

The deterioration of the buildings due to reduced maintenance levels is also of great concern to the LRA.

3.4.5 Electrical Systems

Electrical service is only available at the two cantonment areas. No service is provided along Range Road past the current FBI range or to other areas on the site.

Electrical power for Camp Bonneville is provided by Clark Public Utilities with pole-mounted overhead electrical wires and transformers. The electrical systems existing within buildings at both camps are provided by grounded electrical distribution service. The barracks buildings are typically served by a 60 amp panel, and the kitchen and dining hall buildings are served by an 800 amp panel.

Lighting for the barracks buildings is by exposed incandescent bulbs mounted on four-inch junction boxes. The lighting for the mess hall and classroom buildings is by older-style fluorescent fixtures.

The cost to bring the two cantonment areas up to minimum current electrical standards is estimated to be approximately \$50,000.

TABLE 1

BONNEVILLE CANTONMENT FACILITIES

BUILDING NUMBER	CONSTRUCTION TYPE	YEAR BUILT	PAST USE	CURRENT USE
1815	Metal building with a concrete floor.	1976	Well Pump House	Well pump house
1826	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST	1927	Barracks	Barracks
1828	The forced air HVAC is powered by a 275-gallon diesel AST	1933	Barracks	Barracks
1833	Wood building with a concrete floor. The HVAC is electric powered.	1927	Latrine	Latrine
1834	Wood building with a wood floor. This building has no HVAC.	1927	Training Chamber	This facility is not currently in use.
1837	Wood building with a wood floor. The forced air HVAC is powered by a 275-Gallon diesel AST.	1927	Barracks	Barracks
1847	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks	Barracks
1848	Wood building with a wood floor. The forced air HVAC is powered by two 275-gallon. diesel ASTs.	1933	Mess Hall	Mess Hall
1857	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks	Barracks
1864 ^a	Wood building with transite siding and a concrete floor. This building has no HVAC.	1955	Grounds Shop	Grounds Shop. Storage of miscellaneous grounds equipment including 3 all terrain vehicles, small gas containers, and car size batteries.

1867	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1927	Barracks.	Barracks
1911	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1920	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1922	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1930	Wood building with a wood floor. This building has no HVAC	1933	Cold Storage	Storage
1932	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1934	Wood building with a concrete floor. The HVAC is electric powered.	1933		Latrine
1940	Wood building with a wood floor. The forced air HVAC is powered by two 275-gallon diesel ASTs.	1933	Day Room/AAFES Branch	Day Room/Classroom
1942	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1933	Barracks	Barracks
1962	Unknown	1933	Unknown	Burned
1963	Wood building with a wood floor. This building has no HVAC.	1928	Storage	Storage. This building stores construction materials, such as paint, wood, sacks of concrete, and <u>nails</u>
1980	Wood building with a wood floor. The forced air HVAC is powered by a 275-gallon diesel AST.	1928	Command Post	Command Post

190	Unknown	Unknown	Outdoor Theater	Burned
1992	Metal building with a concrete floor. This building has no HVAC.	1978	Water Well Pump House	Water Well Pump House
1995	Metal building with a concrete floor. This building has no HVAC.	1978	Sewage Treatment Chemical Storage.	Sewage Treatment Chemical Storage. This building stores sodium hypochlorite, typically up to 10 gallons.
1997	Concrete	1978	Sewage Lift Station	Sewage Lift Station
2663	Concrete building with a concrete floor. This building has no HVAC.	1952	Water Treatment Chemical Storage	Water Treatment Chemical Storage. This building stores sodium hypochlorite, typically up to 10 gallons.
2950	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Bunker	Ammunition Bunker. This building stores the various types of ammunition brought on site by units using the facility.
2951	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Bunker	Ammunition Bunker. This building stores the various types of ammunition brought on site by units using the facility
2953	Subsurface concrete building with a concrete floor. This building has no HVAC.	1976	Ammunition Bunker	Ammunition Bunker. This building stores the various types of ammunition brought on site by units using the facility

Notes:

AST: Aboveground storage tank

HVAC: Heating, ventilation, air conditioning

(a): Information regarding hazardous materials/waste management associated with this facility is discussed in Section 3.4. 1.

TABLE 2
KILLPACK CANTONMENT FACILITIES

Building Number	Construction Type	Year Built	Past Use	Current Use
4125	Wood frame structure with a dirt floor. This building has no HVAC.	1958	Storage	Storage This open structure is used as a carport to store vehicles.
4126	Wood building with a wood floor. This building has no HVAC.	1958	Storage	No longer in use.
4155	Wood building with a wood floor. The HVAC is electric. powered.	1935	Barracks	Housing
4314	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Barracks
4316	Wood building with a wood floor. The HVAC is electric powered	1935	Barracks	Barracks
4325	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Barracks
4327	Wood building with a wood floor. The HVAC is electric powered.	1935	Barracks	Barracks
4337	Wood building with a concrete floor. The HVAC is electric powered.	1935	Latrine	Latrine
4345	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4348	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4356	Wood building with a wood floor. The HVAC is electric- powered.	1936	Barracks	Barracks
4364	Wood building with a concrete floor. The HVAC is electric powered.	1935	Latrine	Latrine
4366	Wood building with a wood floor. The HVAC is electric- powered.	1936	Barracks	Barracks
4368	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks

4377	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4378	Wood building with a concrete floor. This building has no HVAC.	1935	Storage	Storage. This building stores items associated with grounds maintenance, such as lawnmowers, small gasoline containers, 32-ounce containers of oil, and weed whackers.
4387	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Barracks
4389	Wood building with a wood floor. The HVAC is electric- powered.	1935	Mess Hall	Mess Hall
4398	Wood building with a wood floor. The HVAC is electric- powered.	1935	Barracks	Range Control
4475	Wood building with a concrete floor. This building has no HVAC.	1937	Vehicle Maintenance	Vehicle Maintenance. This building is used to store vehicles and items associated with vehicle repair.
4475a ^a	Metal shed with a metal floor.	1992	Hazardous Materials Storage	Hazardous Materials Storage. This building was observed to store a 55-gallon drum of oil and several containers of antifreeze.
4475b ^a	Metal shed with a metal floor.	1992	Hazardous Materials Storage	Hazardous Materials Storage. This building was observed to store 4 55-gallon drums of oil, 4 55-gallon drums of antifreeze, and 8 55-

				gallon drums of transmission oil.
4476 ^a	Cinder block shed with a concrete floor.	1990	Covered Storage	Covered Vehicle Maintenance Storage. This building stores miscellaneous supplies for vehicle maintenance, including a 55-gallon drum used to collect waste oil.
4476a	Metal roof with concrete secondary containment.	1994	1,000-gallon AST	This building is covered storage for a 1,000-gallon AST with secondary containment.
4483	Wood building with a concrete floor.	1993	Fire Station	Fire Station. Relocated fire station stores one fire truck.
4522	Metal building with a concrete floor.	1950	Water well pump building	Water Well Pump Building

Notes:

AST: Aboveground storage tank

HVAC: Heating, ventilation, air conditioning

(a): Information regarding hazardous materials/waste management associated with this facility is discussed in

Section 3.4. 1.

TABLE 3

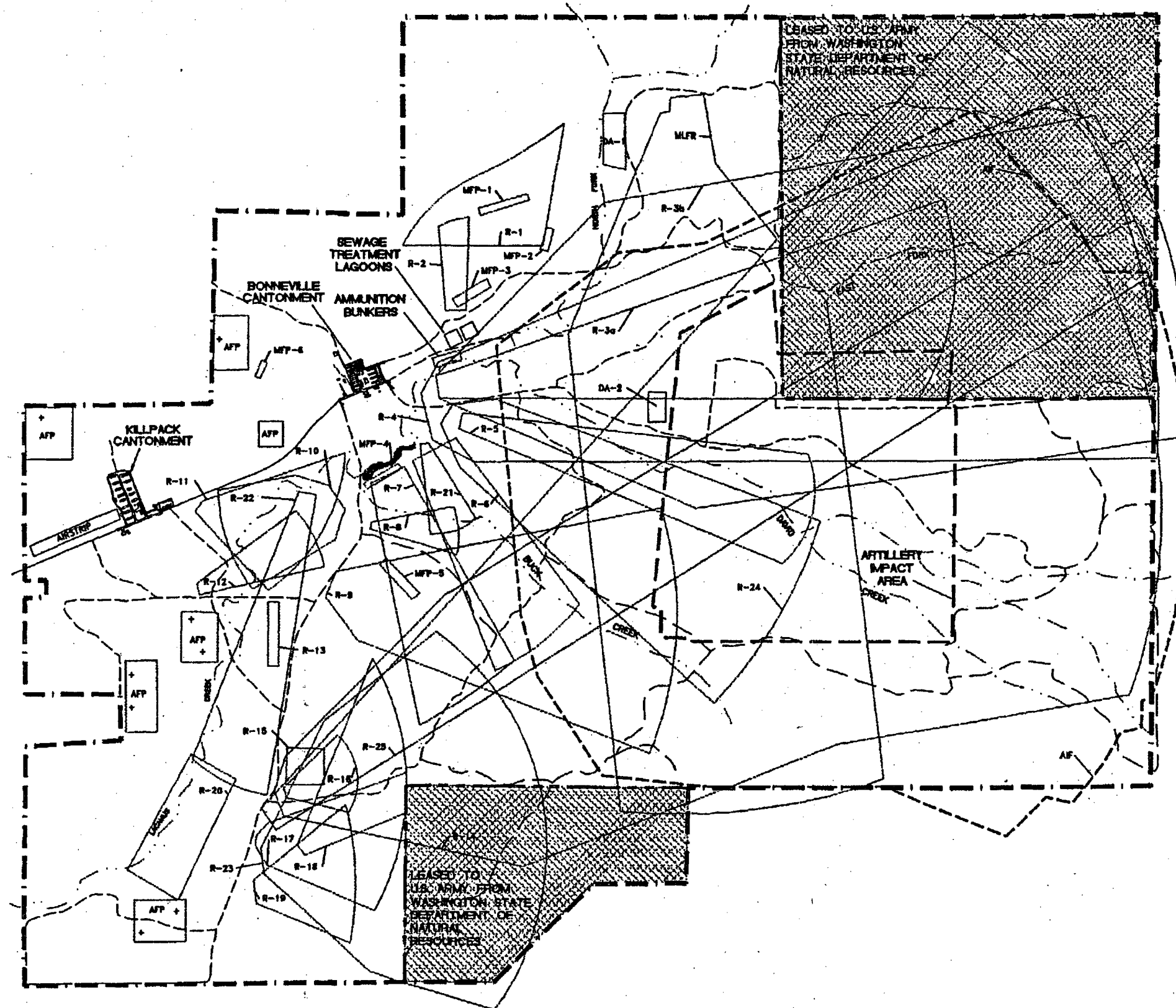
RANGE NUMBERS, USE, AND WEAPONS TYPE

Range Number	Use	Weapons
R-1	Small Machine Gun Range	.30 caliber
R-2	Pistol Range	22 through 45 Caliber
R-3a	K.D. Rifle Range	M1, M14
R-3b	Night Fire range	NA
R-4	Automated Record Fire and 25 Meter Zero	M16
R-5	Field Firing Range	M1, M14
R-6	Record Firing Range	50 caliber, shotgun, pistol
R-7	1,000 Inch Machine Gun and Moving Target	50 caliber
R-8	F.B.I. Range	45 caliber, 9 mm, 357, 38 caliber
R-9	Combat Pistol Range	22 through 45 caliber
R-10	Grenade Launcher Range	40 mm
R-11	Mortar Range	14.5 Artillery Subcaliber
R-12	Mortar Range,	14.5 Artillery Subcaliber
R-13	Mortar Training Shell Course	M203, LAW, and mortar
R-14	25 meter and Machine Gun Range	M-1, M-16, and 50 caliber machine gun
R-15	Live Grenade	Grenades, Claymore mine
R-16	Rifle Grenade/25 Meter Small Machine Gun	M1 and 30 caliber small machine gun

R-17	Rocket Launch Range	3.5 Practice
R-18	Unidentified	NA
R-19	Infiltration Course 1	30-06, M1
R-20	M31 Field Artillery Range	14.5 Artillery Subcaliber
R-21	Pistol and Shotgun Range	All pistols and shotgun
R-22	Mortar Practice Range	14.5 Artillery Subcaliber
R-23	Infiltration Course 2	Unknown
R-24	Pistol Range	All Pistols
R-25	Machine Gun	M60
MLFR	Maneuver Live-Fire Range	Unknown
AFP	Artillery Firing Point	105 mm

Note:

NA: Not available



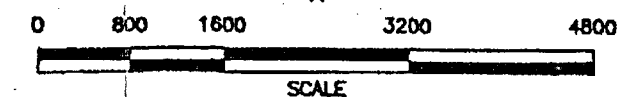
LEGEND

RANGE	USE	WEAPONS
R-1	SMALL MACHINE GUN RANGE	30 CALIBER
R-2	PISTOL RANGE	22 THROUGH 45 CALIBER
R-3a	K.D. RIFLE RANGE	K.D. RIFLE RANGE
R-3b	NIGHT FIRE RANGE	UNKNOWN
R-4	AUTOMATED RECORD FIRE AND 25 METER ZERO	M16
R-5	FIELD FIRING RANGE	M1, M14
R-6	RECORD FIRING RANGE	50 CALIBER, SHOTGUN, PISTOL
R-7	1000 INCH MACHINE GUN AND MOVING TARGET	50 CALIBER
R-8	FBI RANGE	45 CALIBER, 3mm, 357, 38 CALIBER
R-9	COMBAT PISTOL RANGE	22 THROUGH 45 CALIBER
R-10	GRENADE LAUNCHER RANGE	40 mm
R-11	MORTAR RANGE	14.5 ARTILLERY SUBCALIBER
R-12	MORTAR RANGE	14.5 ARTILLERY SUBCALIBER
R-13	MORTAR TRAINING SHELL COURSE	M203/LAW, AND MORTAR
R-14	25 METER AND MACHINE GUN RANGE	M-1, M-16, AND 50 CALIBER MACHINE GUN
R-15	LIVE GRENADE	GRENADES, CALYMORE MINE
R-16	RIFLE GRENADE / 25 METER SMALL MACHINE GUN	M1 AND 30 CALIBER SMALL MACHINE GUN
R-17	ROCKET LAUNCH RANGE	3.5 PRACTICE
R-18	UNIDENTIFIED	
R-19	INFILTRATION COURSE 1	30-06, M1
R-20	M31 FIELD ARTILLERY RANGE	14.5 ARTILLERY SUBCALIBER
R-21	PISTOL AND SHOTGUN RANGE	ALL PISTOLS AND SHOTGUN
R-22	MORTAR PRACTICE RANGE	14.5 ARTILLERY SUBCALIBER
R-23	INFILTRATION COURSE 2	UNKNOWN
R-24	PISTOL RANGE	ALL PISTOLS
R-25	MACHINE GUN	M60
MLFR	MANEUVER LIVE-FIRE RANGE	UNKNOWN
AFP	ARTILLERY FIRING POINT	105mm
AIF	ARTILLERY IMPACT AREA	
DA-1	DEMOLITION AREA	
DA-2	DEMOLITION AREA	

MORTAR FIRING POINTS

MFP-1	4.2 INCH
MFP-2	61mm
MFP-3	UNKNOWN
MFP-4	UNKNOWN
MFP-5	UNKNOWN
MFP-8	UNKNOWN

—	RANGE FAN
---	ARTILLERY IMPACT AREA
---	ARTILLERY IMPACT FAN
---	MILITARY RESERVATION BOUNDARY
---	LEASED AREAS BOUNDARY
---	ALL WEATHER, HARD SURFACE, ASPHALT ROAD
---	ALL WEATHER, LOOSE SURFACE, GRAVEL ROAD
---	FAIR WEATHER, LOOSE SURFACE, EARTHEN ROAD
+	FIRING POINT
---	CREEKS
---	LEASED AREA



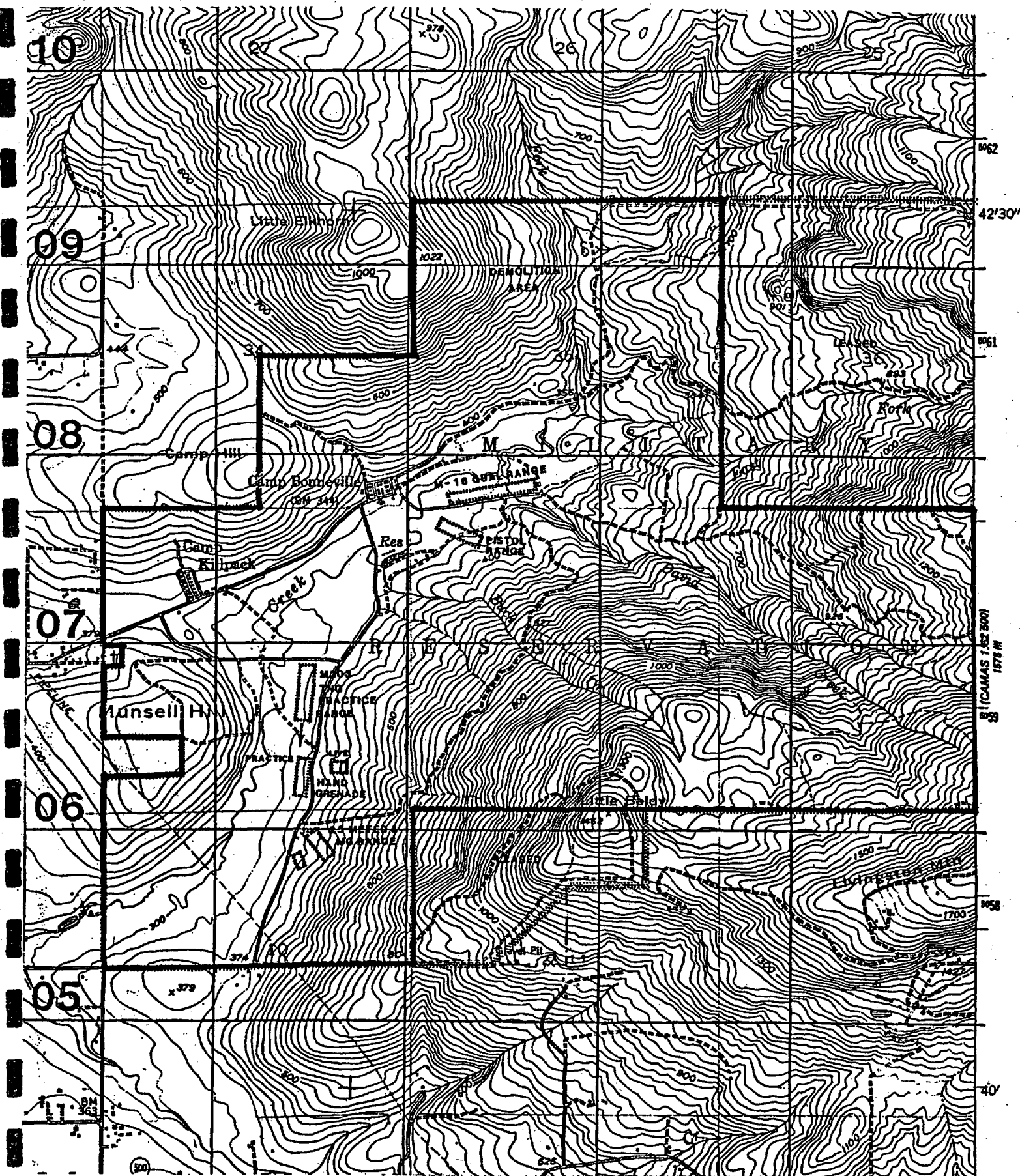


Figure 2: Site Topography Map

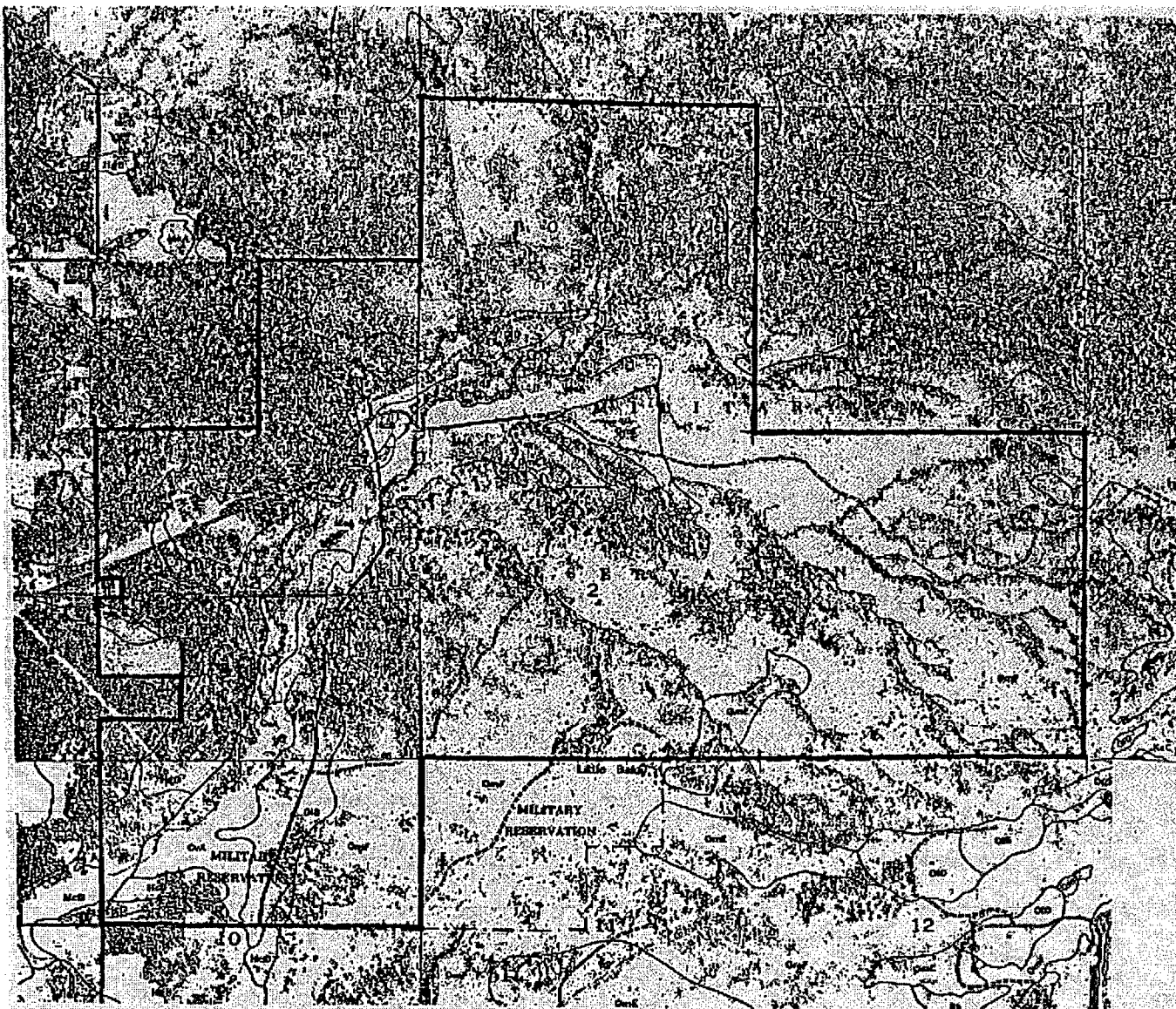


Figure 3:
Soils Map

Section 4.0

LAND USE PLAN

4.1 Planning Framework

The following Principles for Camp Bonneville Local Redevelopment Authority Planning were established and approved by the LRA Reuse Planning Committee on June 19, 1996 and by the Clark County Board of Commissioners on May 20, 1997:

-
- **Self-Sustaining** - Any redevelopment proposed for Camp Bonneville must have funding sources which will over the long term cover all expenses for capital improvements and ongoing operations and maintenance. A financial plan will be developed which will ensure that the reuse activities will be self-sustaining in phases over a five year period.
- **Locally Focused and Directed** - Redevelopment will focus on meeting the needs of the local Clark County community. The planning process for redevelopment will, wherever possible, be directed by representatives of the local community.
- **Open Process** - A concerted effort will be made to ensure that ideas and concerns of individuals and groups affected by base closure and reuse will be heard and given adequate consideration and response. Active and open communications between all parties involved in the reuse planning process will be fostered to result in an atmosphere with no surprises. Community involvement and media relationships will be promoted to enhance the public's understanding of the reuse planning process.
- **Consideration of Impact to the Surrounding Neighborhoods** - Reuses proposed must be compatible with the infrastructure and rural nature of the area surrounding Camp Bonneville.

The Camp Bonneville site is not appropriate for housing of offenders, however, offender crews will be utilized for maintenance activities as in current county parks.

Timber management will be a revenue source at Camp Bonneville primarily through selective thinning. There will be no "clear cuts" except where required for site development and environmental management purposes.

- **Overall Community Need** - The Reuse Plan will reflect the needs of the community, but may not include all reuses which are proposed in public hearings, letters, calls, by the LRA Reuse Planning Committee, the Steering Committee, and/or the Steering Committee subcommittees.
- **Cooperation and Consensus-Building** - The local community will work with state and federal agencies, tribal interests, and agencies serving the homeless to reach consensus on

Camp Bonneville Reuse Plan

what is best for the local Clark County community.

- ***Environmentally Conservative*** - Any development proposed must be compatible with the rural and natural state of the property. To the extent possible, the aesthetics and environmental qualities of the Camp Bonneville property will be maintained. The environment will be enhanced through redevelopment, with careful attention to wildlife corridors, wetlands, and endangered and/or threatened species.

4.2 Study Approach and Planning Process

The reuse planning study approach for Camp Bonneville generally followed the recommended reuse planning process and guidelines described in the Community Guide to Base Reuse prepared by the Office of Economic Adjustment of the Office of the Secretary of Defense . The reuse planning process consisted of the following components:

Data Collection and Analysis by LRA subcommittee members and staff

- Technical Studies by Consultant
- Preparation of Preliminary Reuse Alternatives
- Evaluation of Reuse Alternatives
- Preparation of a Recommended Camp Bonneville Reuse Plan
- Recommended Management Structure for Plan Implementation

The following, in approximate chronological order, describes the reuse planning process which was undertaken by Clark County and resulted in development of the Reuse Plan for Camp Bonneville:

- Clark County established and was recognized by the Office of the Secretary of Defense as the Local Redevelopment Authority (LRA) for the Camp Bonneville Reuse Plan. The Board of County Commissioners is the LRA Board, with oversight of the planning process provided by a five member Reuse Planning Committee.
- The LRA, after public hearings, appointed six subcommittees to assist with reuse planning effort. LRA meetings were held from November 1996 through June 1996, and from April 1997 through May 1998.
- Three alternative development scenarios were prepared for Steering Committee review and comments from November 1997 through January 1998.
- RPC reviewed, and after holding public hearings, modified the Steering Committee's preferred reuse plan and forwarded the RPC's draft reuse plan to BOCC.
- BOCC public hearings were held on May 7 & 14, 1998.
- Draft reuse plan modified per BOCC decision in June 1998.
- BOCC approval of draft reuse plan.
- Reuse plan refinement and costs updated to current year dollar amounts, February 2003.
- Reuse plan update to reflect Conservation Conveyance, NOV 2005

4.3 Technical Studies

In addition to information provided by LRA subcommittee members, the consultant reviewed reports prepared by the U.S. Army, other federal agencies, and Clark County. Interviews were conducted with local government officials, key community representatives, Army base closure office staff, and the relevant state, regional, and local agency personnel. Data collection included the final BRAC Cleanup Plan Report for Camp Bonneville (dated October 1996), the draft final Environmental Baseline Survey Report for Camp Bonneville (dated November 27, 1996), base maps provided by the Army, as well as the Army's recent building inventories. On-site inventory of existing conditions supplemented the data collected from existing records and a building inventory was conducted to evaluate their reusability.

In addition to the infrastructure evaluation, market and financial feasibility analyses were conducted, as well as an evaluation of the noise impact of firing ranges on the other reuses and the surrounding neighborhood.

Regional law enforcement agencies contributed funding to expand the original scope of work to include an analysis of the feasibility of developing a regional law enforcement training center at Camp Bonneville. (See Appendix G).

4.4 Public Participation and Alternate Scenario Development

Reuse advocates from the local community prepared detailed business plans including information on the reuse, space and facilities required for each proposed use. These plans were reviewed by other reuse advocates and the advisory committees to identify areas of incompatibility, neighborhood impact, financial cost and benefit, and overall community need. Subcommittees identified areas that needed more technical evaluation. These technical studies were funded through the OEA reuse planning grant. Throughout these studies, information obtained was shared with the Steering Committee, with information requests regularly made of subcommittee members in a cooperative process with consultant and staff.

As part of the public participation, approximately 27 public meetings were held, including:

- November 1995 to January 1996 - Public meetings for input on potential reuses.
- February to June 1996 - Subcommittee, Steering, and Reuse Planning Committee meetings
- April 1997-January 1998 - Subcommittee, Steering and Reuse Planning Committee meetings
- July 17, 1997 - Public meeting by the LRA Reuse Planning & Steering Committees
- January 28, 1998 - Public meeting by the Reuse Planning Committee.
- January 31, 1998 - Open House at Camp Bonneville.
- February 2 & 18, 1998 - Public hearings by the Reuse Planning Committee.

Camp Bonneville Reuse Plan

- May 7 & 14, 1998 - Public hearings by the Board of County Commissioners, acting as the Local Redevelopment Agency.

Public meetings were advertised, and newsletters were also sent to Clark County residents to inform them of the past, present and future reuse planning efforts; solicit their comments; and notify them of upcoming public hearings, meetings, and open houses. Outreach efforts to solicit notices of interest in the property from agencies serving the homeless, as well as to state, local, and tribal governments, were also conducted in 1996, with two workshops held on-site at Camp Bonneville. Information such as reports and newsletters has also been made available on a website (www.co.clark.wa.us).

A series of planning graphics were prepared to identify the opportunities and constraints potentially affecting the reuse of Camp Bonneville's facilities, land areas, natural resources, and surrounding neighborhoods. The resulting mapping summarized the data collection effort and technical studies providing a planning framework from which reuse alternatives were generated in the subsequent phases of reuse planning.

Three alternative development scenarios (**Figures 5, 6, and 7**) were prepared by the planning consultant team, based on input received from the Steering Committee and its subcommittees. From these three scenarios, a preferred plan scenario (**Figure 6**) and an alternate plan scenario (**Figure 5**) were recommended by the Steering Committee and forwarded to the Reuse Planning Committee for their consideration. Reuses recommended by the Steering Committee included: regional park; equestrian and hiking trails; orienteering; outdoor school/rustic retreat center; Native American Cultural Center; Clark College classrooms and environmental study area; paragliding; model airplanes; paintball; search & rescue dog training; RV camping; and tent camping (in organized campground areas only).

After public hearings and meetings with the Steering Committee, the Reuse Planning Committee modified the Steering Committee's recommended plan as follows: The law enforcement firing ranges, law enforcement training center, and an area reserved for potential future public firing range usage were added to the reuse plan (**Figure 8**). The Reuse Planning Committee included the Emergency Vehicle Operations Course (EVOC) in the reuse plan, but recommended that the EVOC be located at Camp Bonneville only if there are no other feasible locations available elsewhere in the county. Paragliding, paintball, and model airplanes were removed from the Steering Committee's recommended plan. The RPC agreed with the Steering Committee's recommendation to not include hunting, four wheel drive vehicle trails, and a motor bike trailhead and access road in the reuse plan. The Reuse Planning Committee also recommended concentrating development in the two barracks area, and moving the proposed Clark College classrooms to the Camp Killpack barracks area from the location at the southwest corner of the property that had been requested by Clark College.

On May 7, 1998, the Clark County Board of Commissioners held its public hearing to consider testimony on the reuse plan proposed by the Reuse Planning Committee. The Board of Commissioners continued the hearing to May 14, 1998 for their deliberations and decision on the

Camp Bonneville Reuse Plan

reuse plan. The Board of Commissioners requested the Reuse Planning Committee's reuse plan be modified as follows (**Figure 9**): the EVOC was eliminated, RV and tent camping to be located to protect the Lacamas Creek riparian zone, and consideration be given to designating an area for a potential military cemetery adjacent to the existing Livingston Cemetery. The Commissioners requested a draft reuse plan be submitted for their approval and submittal to the Army.

4.5 Preferred Reuse Plan

The following components make up the final Reuse Plan for Camp Bonneville:

4.5.1 Regional Park

A regional park approximately 1,000 acres in area is recommended along the western portion of the Camp Bonneville property. This public park will provide needed opportunities for the local community to enjoy both active and passive recreation activities. It is proposed that this regional park be managed and maintained by Clark County.

Proposed public park facilities include the following recreational opportunities:

- Recreation trails (for hiking, mountain bicycling, and equestrian use)
- Group picnic areas and picnic shelters
- Amphitheater and stage (for outdoor school and small local events)
- Meadow area for group picnicking and recreation sports activities
- Restroom facilities
- Tent camping facilities
- Recreational vehicle camping facilities
- Public firing range
- Archery practice range
- Park watch person's residences
- Vehicular access road
- Designated parking areas
- Ponds for recreational use and environmental education
- Native American cultural center at the Bonneville cantonment area
- Environmental study area
- Orienteering

Personal property at Camp Bonneville was inspected and evaluated by County staff in 1996. A second evaluation will be conducted by September 1998 to identify items which are needed for the reuse plan. It is anticipated that much of the kitchen equipment will be essential, as well as maintenance equipment such as the following: Ford tractor with front loader and backhoe, John Deere tractor with a side arm sickle bar mower and a 6' rotary mower attached, a post hole auger,

Camp Bonneville Reuse Plan

chipper/shredder, new flail mower, lawn mowers, and weed eaters. A complete list will be prepared after the second evaluation is completed.

4.5.2 Law Enforcement Training Center

A law enforcement training center is proposed to serve the regional needs of the law enforcement agencies of southwest Washington. At this facility, police officers will receive basic training, learn new skills, and firearms techniques. This law enforcement training academy will be one of the user groups for classrooms and offices which will be constructed at the Killpack cantonment area. In addition, local law enforcement firing ranges are proposed east of Lacamas Creek in the southwest section of Camp Bonneville. An equestrian riding ring would be provided in the general vicinity of Camp Killpack, which will be open to the general public when not required for law enforcement training. A physical fitness course and canine training area would also be provided in this area. The canine training area would also be used for training of search and rescue dogs. Firing ranges will include one handgun range, one rifle range, and an area provided for future construction of an indoor firing range. Adjacent to the ranges will be a shooting house, a training building where law enforcement officers are provided realistic environments for training in making decisions about whether or not to fire their guns.

Firing ranges will be constructed as needed by both law enforcement and the public. At the present time, the County Sheriff's Office has a shooting range, and two public firing ranges are available as well. Some of the firing range areas identified on the reuse plan are ranges that will be constructed if and when the present off-site firing ranges are closed due to increased development in their areas, or if these firing ranges no longer meet the needs of law enforcement and the public. Some range facilities, however, such as the shooting house and law enforcement rifle range, may be constructed soon after property transfer.

Classroom facilities will be shared with Clark College in a new facility to be constructed. If this new construction is not financed or if rezoning is not approved, the existing Killpack cantonment structures will need to be upgraded to meet current building codes, ADA requirements, and local government regulations for reuse as classrooms, administrative offices and other support facilities. The remainder of the buildings will be used as a retreat center/outdoor school, with shared usage of the law enforcement buildings when not used for law enforcement purposes.

The law enforcement firing ranges will have safety baffling reinforced with earthen berms, noise baffling to control sound to acceptable levels (compatible with park users and neighbors), and a perimeter fencing surrounding the range compound. These ranges will be operated six months per year during off-peak park and outdoor school usage months (October to March) with no weekend shooting and with shooting scheduled from 8 a.m. to 5 p.m. Evening shooting will be limited to meet minimal law enforcement training requirements, with scheduling subject to further discussions with a local neighborhood advisory group. Prohibiting firing range use (eliminating gunfire noise) during six months each year and on weekends year-round, will facilitate greater usage of all park areas, especially trails that are within close proximity to the ranges

4.5.3 Rustic Retreat Center/Outdoor School

A Rustic Retreat Center/Outdoor School is proposed as the primary reuse of the barracks areas. The retreat center/outdoor school will reuse many of the existing structures after upgrades are completed for compliance with applicable building codes, structural and utility service improvements. New buildings such as a meeting hall will be located within the existing Camp Bonneville cantonment area.

An undeveloped area above and north of the Bonneville barracks area identified on the reuse plan (**Figure 9**) is proposed as a future expansion area for the retreat center.

4.5.4 Native American Cultural Center

Rattling Thunder, a non-profit Native American cultural group representing the area tribes, provides training (drums, art, Native American culture) to Native American youth in the region and assists in coordinating tribal activities such as regional pow wow's. Rattling Thunder requested use of a barracks building and access to kitchen and meadow areas at Camp Bonneville. The Native American Cultural Center will also be open to the general public visiting the regional park and outdoor school. The Cowlitz Indian Tribe and the Confederated Tribes of Grand Ronde were also involved in the planning process and are supportive of the development of a Native American Cultural Center at Camp Bonneville.

4.5.5 Clark College Environmental Field Station

Approximately fifty to sixty acres will be designated for environmental studies in the southwest corner of Camp Bonneville. This site was selected due to the various eco-systems in this creek watershed area and its suitability for water quality research, wildlife habitat studies and native plant community preservation and restoration programs. A new classroom building at the Killpack cantonment will also be constructed to provide three to six classrooms for use by Clark College and County law enforcement for environmental and law enforcement training. Construction of this new facility will require an amendment to the County's comprehensive plan.

4.5.6 Trails & Nature Area

Approximately 2,000 acres will be maintained for trails and nature areas in the central and eastern portions of the Camp Bonneville property. The public will access this area through hiking trails, mountain bike trails, and equestrian riding trails. Environmental learning areas will also be identified for use by all age groups. The County will also work the State Fish & Wildlife Service and US Fish & Wildlife Service to explore opportunities on the site to enhance the fish population and re-introduce native species. The majority of these recreational trails will utilize gravel and unpaved roads and cart tracks which already exist throughout the Camp Bonneville property, however additional trails will be created as funding becomes available. Trails in these natural areas will also be utilized by trail maintenance staff, timber management crews, and emergency response personnel such as fire fighters.

4.5.7 FBI Firing Range

Camp Bonneville Reuse Plan

An area immediately adjacent to the law enforcement firing ranges has been identified for lease by the FBI. The FBI's current range is located less than 1/10th mile from the meadow area, the primary area of public usage. Noise studies indicate that firing ranges must be located no closer than 2,000 feet from neighborhoods and public use areas. Because of this, the FBI has been asked (and has agreed) to move its range to the area which will meet this criteria. Due to safety issues, the FBI has been supportive of the LRA's requirement that the relocated FBI range be baffled. The FBI has estimated past usage to be 60-80 days per year, with usage (except for emergency training) usually able to be scheduled in advance. It is essential for the viability of the regional park that FBI usage be limited to solely meeting the FBI's needs, particularly during the peak months for park and outdoor school usage at the nearby meadow areas. The FBI has been willing to share range usage with law enforcement agencies when FBI agents are available to oversee the usage.

With the closure of Camp Whythicum and the critical shortage of firing ranges, it is expected that law enforcement agencies will request additional usage of the FBI's range. If the property were to be directly transferred to the FBI, the LRA would have no ability to ensure that the FBI range is not put to constant usage, with firing range noise levels during peak park usage months creating a great risk of subsequent closure of the regional park and related activities. Although baffling provides safety, and buffers reduce noise, it is expected that unless more effective noise buffers are invented in the near future, gunfire will still be audible in many areas of the park. Numbers of park users may decrease significantly due to a desire by park users for quiet, natural sounds, and/or an aversion to the sound of gunfire, and/or an involuntary response of fear. The National Parks Service has expressed similar concerns and is willing to assist in sponsoring property transfer with a long term (up to 50 year) renewable lease to the FBI for a firing range site, limiting charges to actual costs incurred from FBI range usage.

4.5.8 Timber Resource Management Area

The Camp Bonneville property has significant forested areas which provide valuable wildlife habitat, stream water quality and watershed protection, and open space. Timber thinning is recommended as part of the management plan to maintain the health of this forest environment, reduce potential fire hazards, and provide a revenue product from timber sales. Forest Management goals will include, but not be limited to the following areas. To simulate an old growth timber stand structure by generating an older age class of the seral species which is Douglas fir. To optimize growth, yield and forest health. The County forestry staff is planning to use several silvicultural techniques to accomplish this, which will be addressed in detail in a forest management plan which will span a 50 year period.

The Timber Resource Management Area of Camp Bonneville is divided into two phases. Phase 1 consists of the western portion of the Camp Bonneville property, most of which is proposed as a county regional park. Phase 2 includes the balance of the property, the majority of which will be designated as open space greenway.

A Timber Inventory Estimate and Valuation Report, dated November 12, 1997, was prepared as part of this reuse planning study and is included as Appendix B of this report.

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To prioritize parcels for cleanup, Clark County's forester will be conducting a more detailed evaluation, assisted by Explosive Ordinance Demolition (EOD) escorts provided by Fort Lewis. The Army's EE/CA report originally planned for January 1999 will estimate cleanup costs and evaluate technological options for cleanup. The more detailed timber analysis will identify parcels which are essential for the viability of the reuse plan, and together with the EE/CA will allow the Army and the local community to identify a transfer timeline that will be in the interests of all.

4.5.9 Wetland/Riparian Area Restoration/Enhancement & Habitat Restoration

Part of the plan for redevelopment of Camp Bonneville includes the restoration and enhancement of existing wetland and riparian areas. Additionally, it is intended that the reuse development process will enhance the entire site for wildlife, fish and native plants.

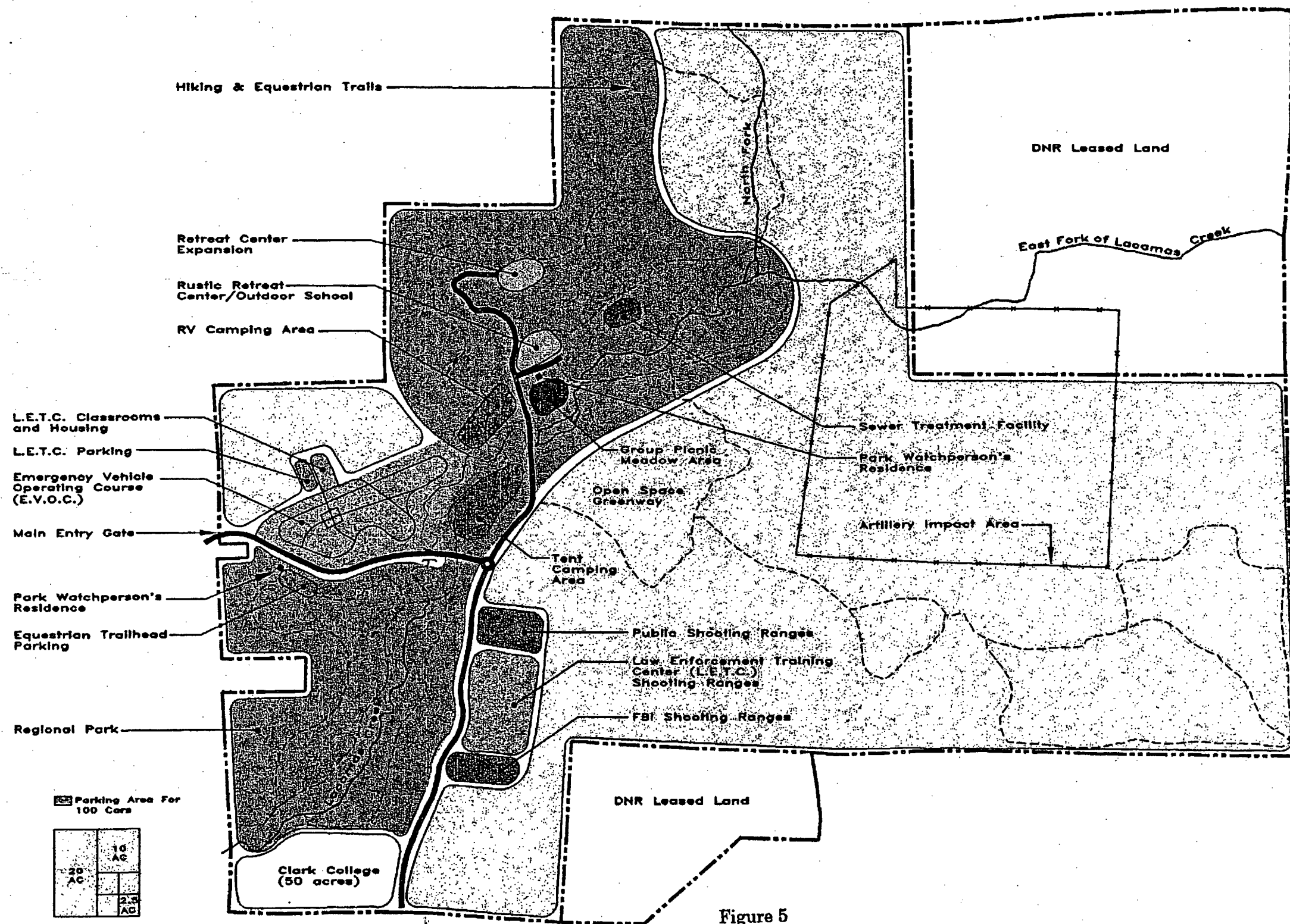


Figure 5
CAMP BONNEVILLE - Scenario One



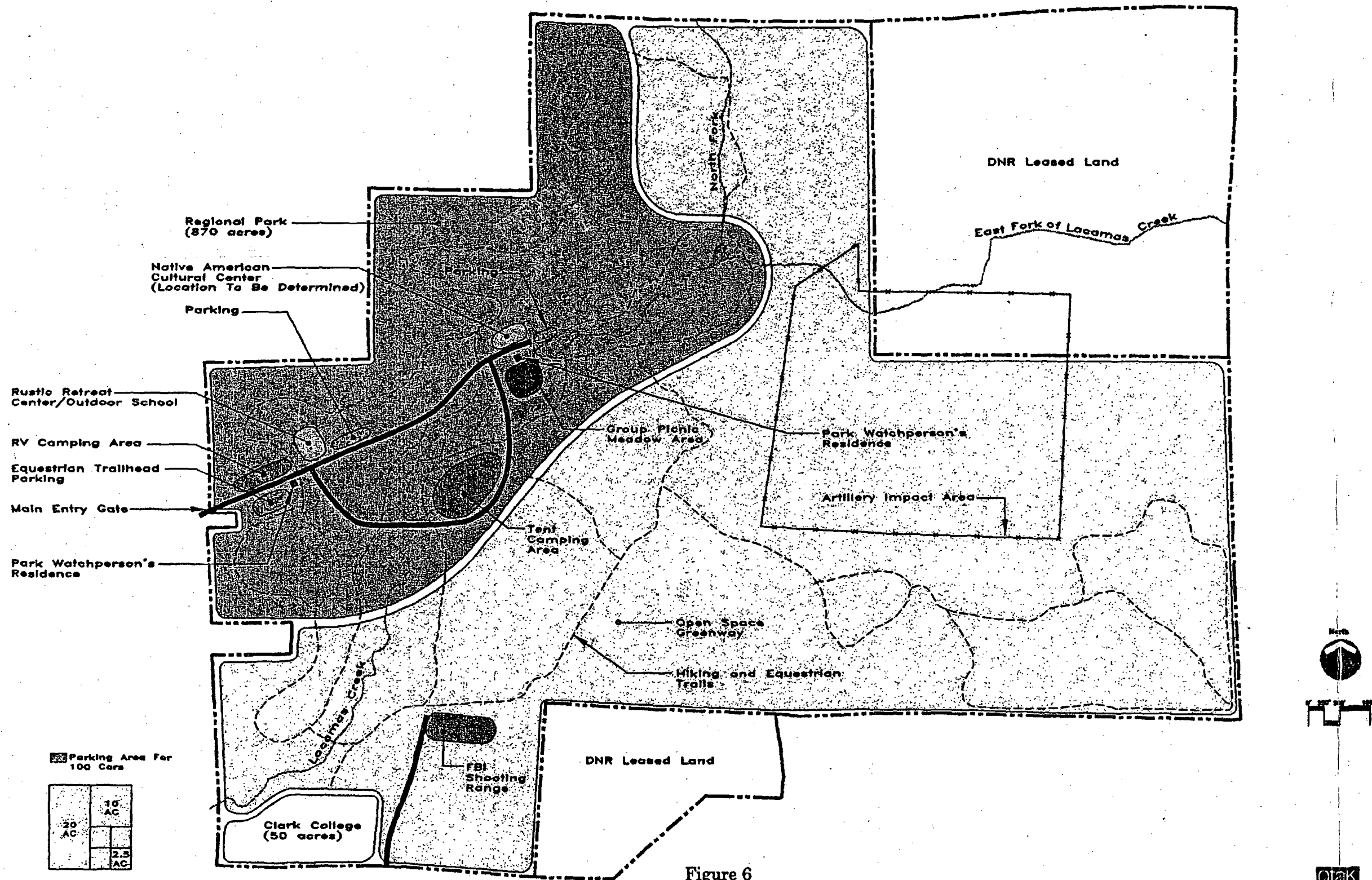


Figure 6
CAMP BONNEVILLE - Scenario Two



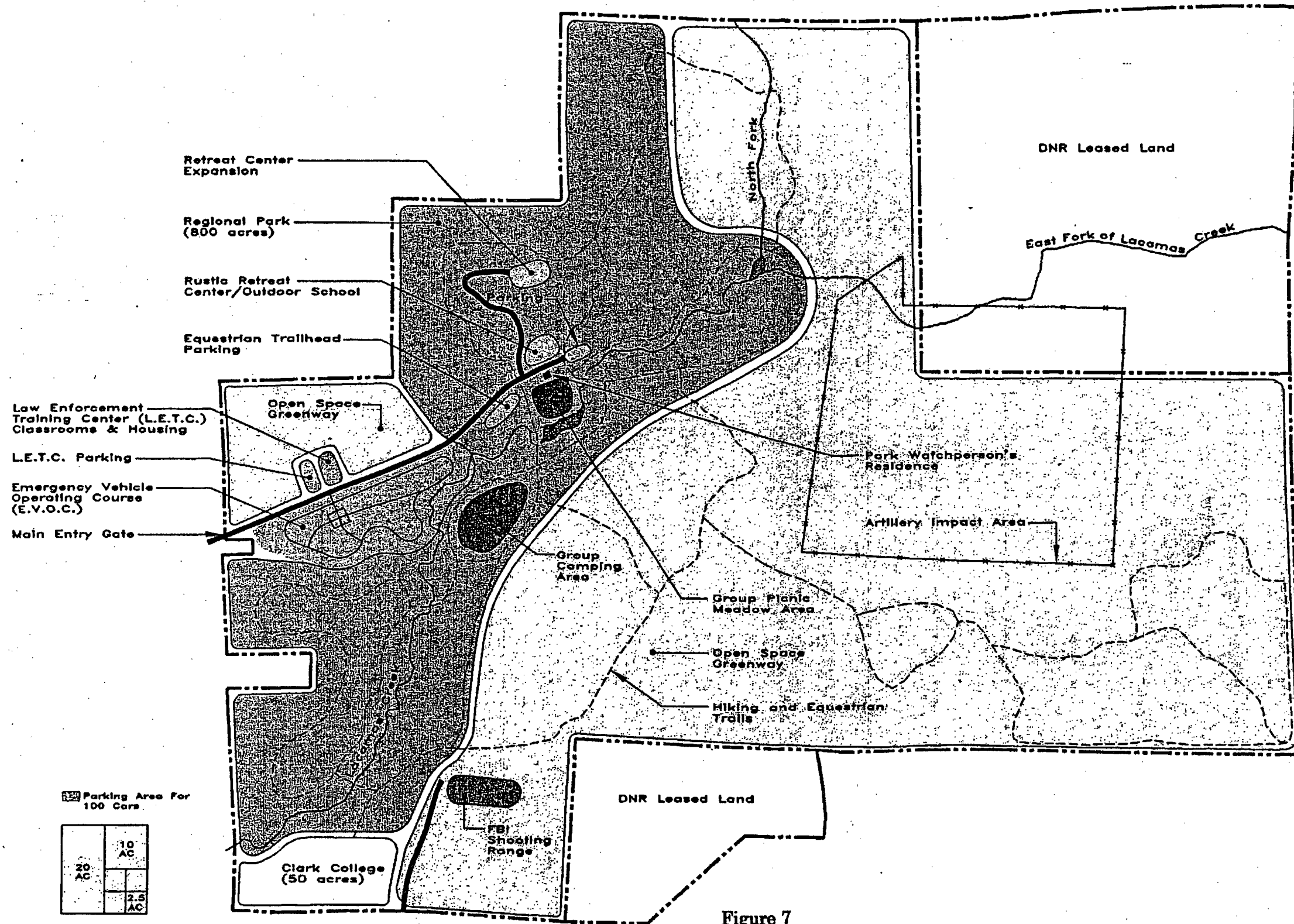


Figure 7
CAMP BONNEVILLE - Scenario Three



**Law Enforcement/Clark College/
Rustic Retreat/Outdoor School
Classrooms & Offices (C/O)**

- Reuse/Renovate Existing Camp Killpack Buildings
- Classrooms
- Administrative Offices
- Future Building Expansion As Needed

40 Acres	80 Acres
40 Acres	

**Rustic Retreat
Future Expansion (RRFE)**

- Future Building

**Rustic Retreat/Outdoor School
(RR/OS)**

- Reuse/Renovate Existing Camp Bonneville Buildings
- Classrooms
- Lodging
- Native American Cultural Center
- New Multi-Purpose Building & Other Building Expansion As Needed

Open Space Greenway (OSG)

- Hiking Trails
- Equestrian Trails
- Mountain Bike Trails
- Wildlife Habitat Area

Regional Park (RP)

- Hiking Trails
- Equestrian Trails
- Mountain Bike Trails
- Picnic Areas & Shelters
- Amphitheater & Stage
- Restrooms
- Tent Camping
- RV Camping
- Park Watchperson's Residences
- Archery Range

**Clark College/Environmental
Study Area (CC/ESA)**

- Field Station for Outdoor Studies

Firing Ranges/EVOC (FR/EVOC)

- Local Law Enforcement Ranges
- FBI Range
- Public Range
- Emergency Vehicle Operating Course (EVOC)

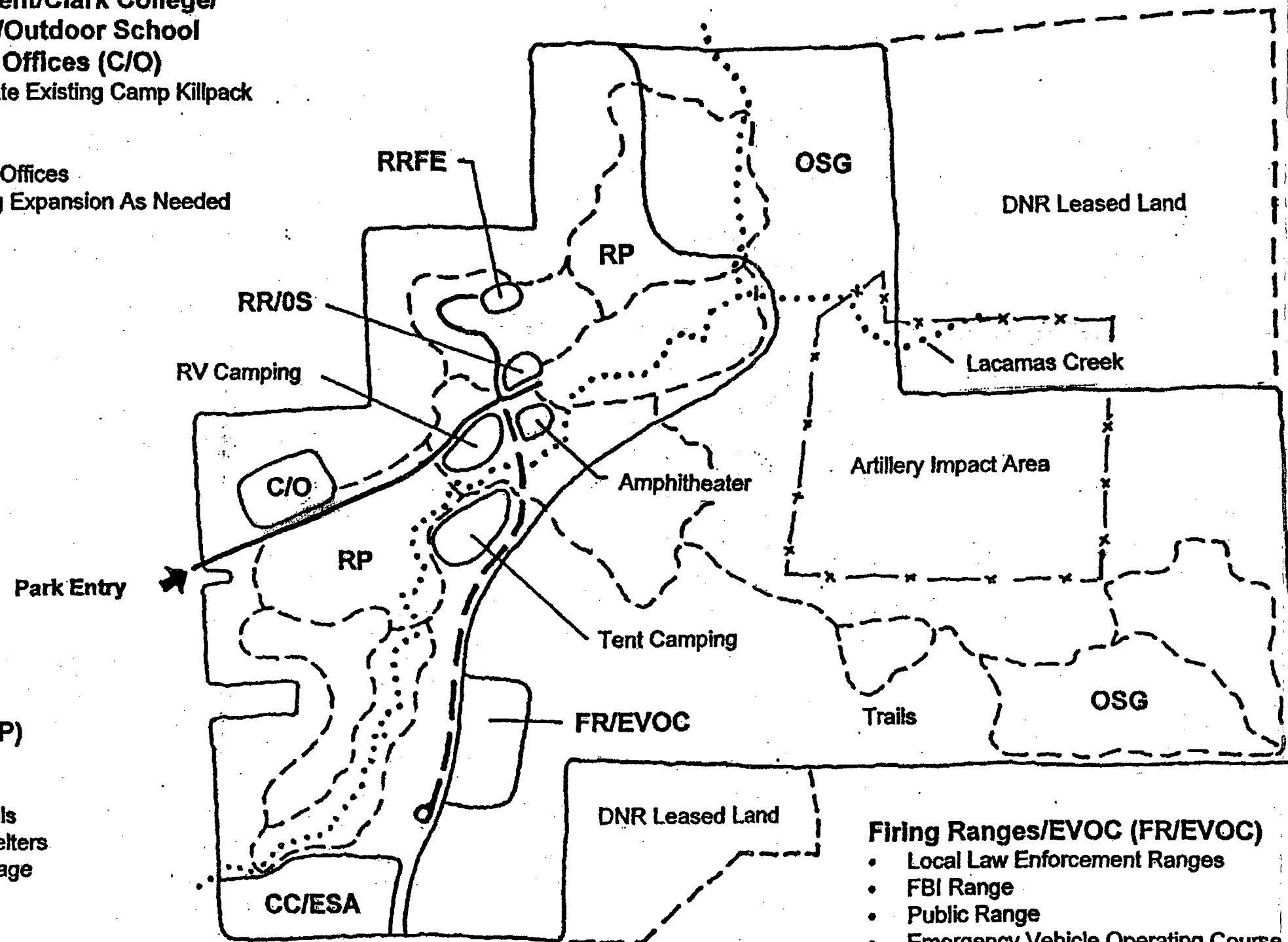


Figure 8

Camp Bonneville
Reuse Planning Committee's Preferred Plan

May 1, 1998

Law Enforcement / Clark College / Rustic Retreat / Outdoor School Classrooms and Offices (C / O)

- * Reuse / Renovate Existing Camp Killpack Buildings for Outdoor School, Retreat Center &/or Law Enforcement Training Center
- * 3 to 6 Classrooms - New Building
- * Administrative Offices
- * Future Expansion As Needed
- * Law Enforcement Training Areas

Rustic Retreat / Outdoor School (RR / OS)

- * Reuse / Renovate Existing Camp Bonneville Buildings
- * Classrooms
- * Lodging
- * Native American Cultural Center
- * New Multi-Purpose Building and Other Building Expansion As Needed
- * Park Administration Center
- * Park Maintenance Headquarters

Rustic Retreat Future Expansion (RRFE)

- * Future Building

Regional Park (RP)

- * Hiking Trails
- * Equestrian Trails
- * Mountain Bike Trails
- * Picnic Areas & Shelters
- * Amphitheater & Stage
- * Restrooms
- * Tent/Yurt Camping
- * RV Camping
- * Park Watchperson's Residence
- * Archery Range
- * Park Entry / Control Station (Fee Collection Booth, Information Board, Kiosk & Turn Around)
- * Park Transit Station & Route
- * General Store
- * Equestrian Center
- * Trailhead & Parking

Firing Ranges (FR)

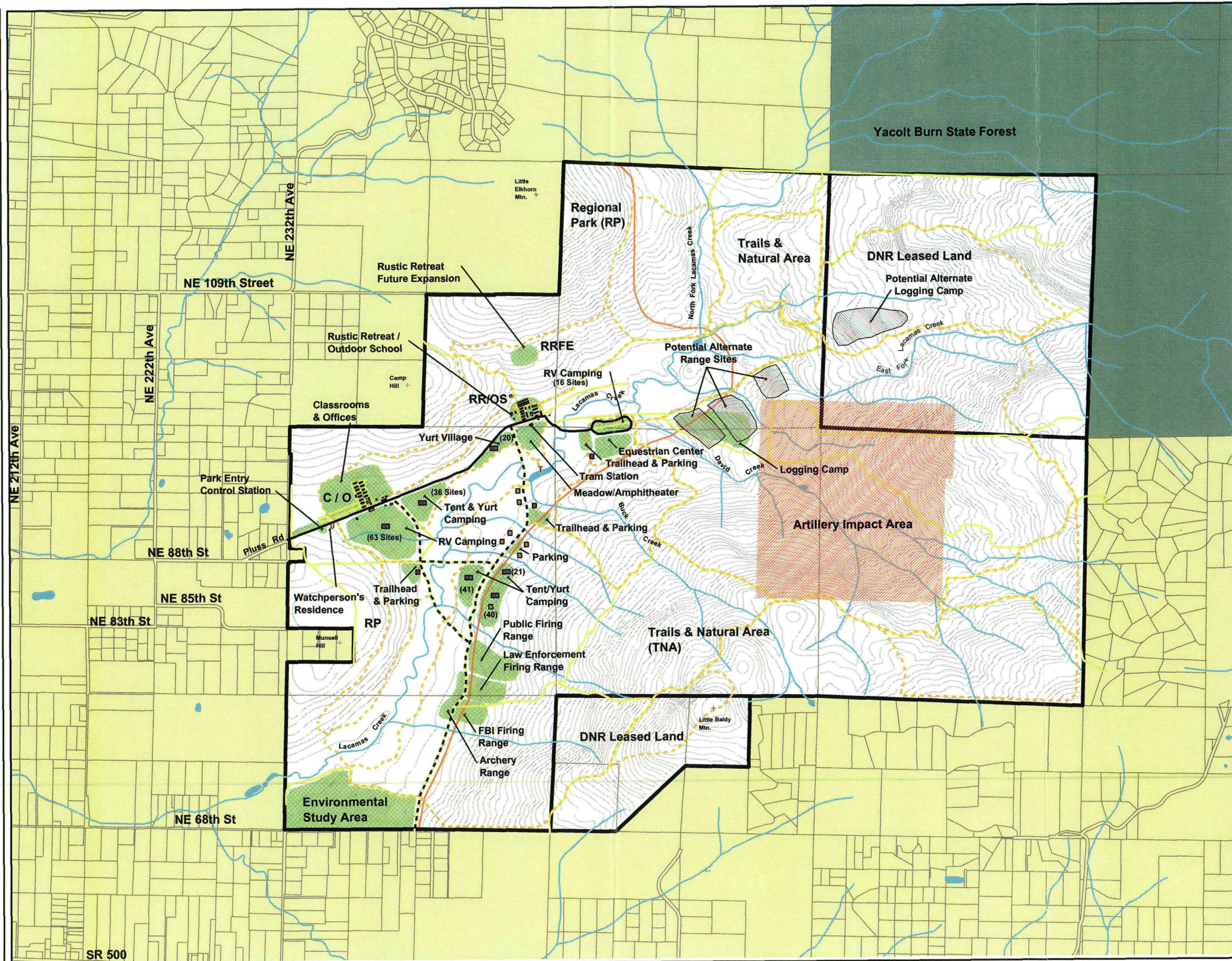
- * Local Law Enforcement Range
- * FBI Range
- * Public Range
- * Restrooms for Shooters
- * Mine Gravel for Range Site

Environmental Study Area (ESA)

- * Outdoor Studies
- * CPU Well Field
- * Water Resource Center (Wastewater Treatment Facility)

Trail and Nature Areas (TNA)

- * Hiking Trails
- * Equestrian Trails
- * Mountain Bike Trails
- * Wildlife Habitat Area



Camp Bonneville Reuse Plan

Preliminary Site Plan

LEGEND

- Restrooms & Showers
- Restrooms
- Watchperson's Residence
- Water Access
- Site Facilities
- 20 Foot Contour Intervals
- Trails
- Existing Unpaved Roads
- Gravel Road
- Paved Road
- Artillery Impact Area
- Regional Park Boundary
- Site Boundary Line
- Existing Buildings
- Taxlots
- Private Property
- Yacolt Burn State Forest

0 285 570 1,140 1,710 2,280 Feet

LAND AREA SUMMARY:

Camp Bonneville:	3,040 acres
DNR Land Area 'A':	620 acres
DNR Land Area 'B':	180 acres
TOTAL AREA:	3,840 acres

the jd white company, inc.



Plot Date: 3-17-03

Information Source: Clark County GIS Data Oct. 2002

Law Enforcement / Clark College / Rustic Retreat / Outdoor School Classrooms and Offices (C / O)

- * Reuse / Renovate Existing Camp Killpack Buildings for Outdoor School, Retreat Center &/or Law Enforcement Training Center
- * 3 to 6 Classrooms - New Building
- * Administrative Offices
- * Future Expansion As Needed
- * Law Enforcement Training Areas

Rustic Retreat / Outdoor School (RR / OS)

- * Reuse / Renovate Existing Camp Bonneville Buildings
- * Classrooms
- * Lodging
- * Native American Cultural Center
- * New Multi-Purpose Building and Other Building Expansion As Needed
- * Park Administration Center
- * Park Maintenance Headquarters

Rustic Retreat Future Expansion (RRFE)

- * Future Building

Regional Park (RP)

- * Hiking Trails
- * Equestrian Trails
- * Mountain Bike Trails
- * Picnic Areas & Shelters
- * Amphitheater & Stage
- * Restrooms
- * Tent/Yurt Camping
- * RV Camping
- * Park Watchperson's Residence
- * Archery Range
- * Park Entry / Control Station (Fee Collection Booth, Information Board, Kiosk & Turn Around)
- * Park Transit Station & Route
- * General Store
- * Equestrian Center
- * Trailhead & Parking

Firing Ranges (FR)

- * Local Law Enforcement Range
- * FBI Range
- * Public Range
- * Restrooms for Shooters
- * Mine Gravel for Range Site

Environmental Study Area (ESA)

- * Outdoor Studies
- * CPU Well Field
- * Water Resource Center (Wastewater Treatment Facility)

Trail and Nature Areas (TNA)

- * Hiking Trails
- * Equestrian Trails
- * Mountain Bike Trails
- * Wildlife Habitat Area

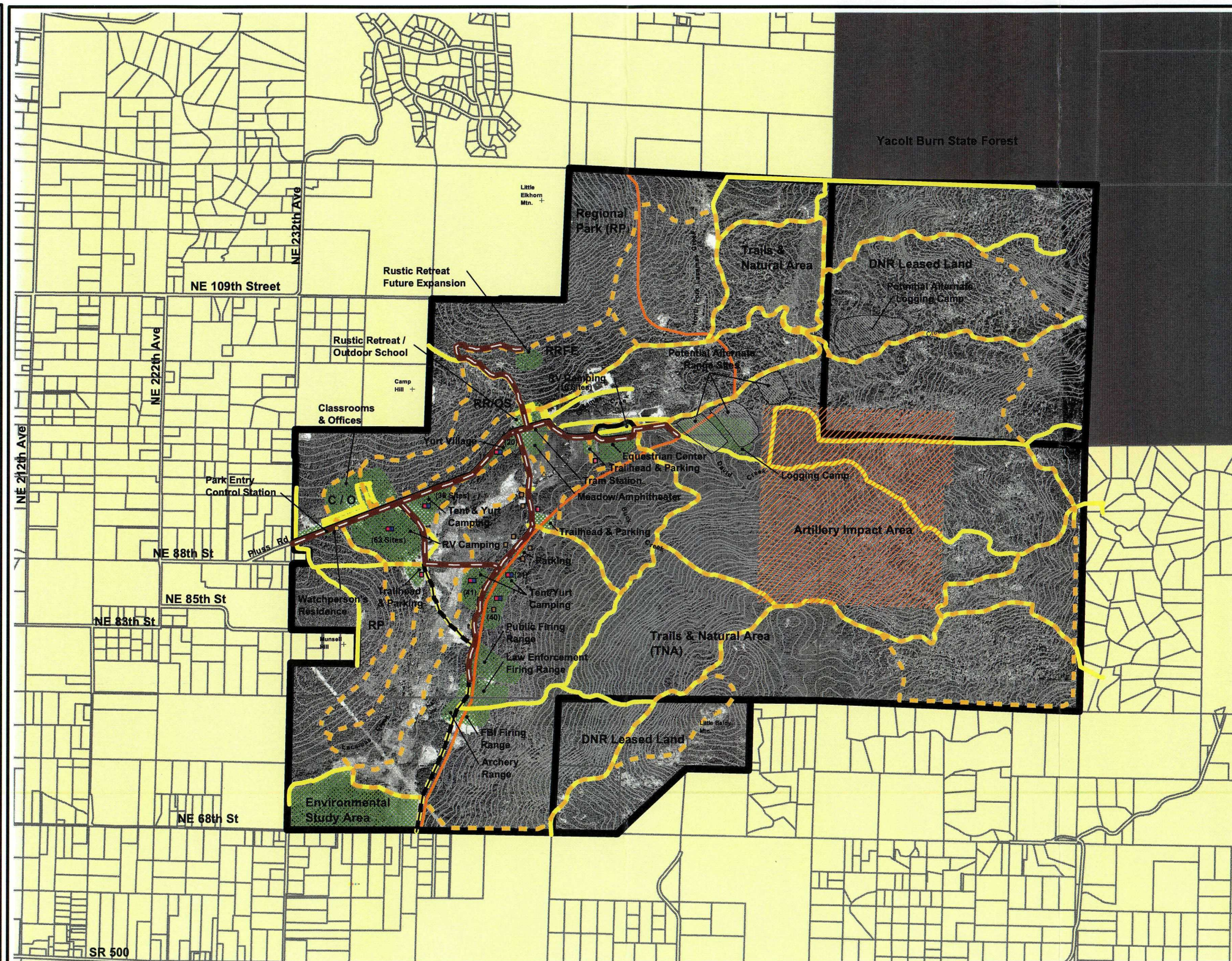


FIGURE 10

Camp Bonneville Reuse Plan

Schematic Utilities Plan

LEGEND

- Utility Corridor
- Restrooms & Showers
- Restrooms
- Watchperson's Residence
- Water Access
- Site Facilities
- 20 Foot Contour Intervals
- Trails
- Existing Unpaved Roads
- Gravel Road
- Paved Road
- Artillery Impact Area
- Regional Park Boundary
- Site Boundary Line
- Existing Buildings
- Taxlots
- Private Property
- Yacolt Burn State Forest



0 250 500 1,000 1,500 Feet

LAND AREA SUMMARY:

Camp Bonneville:	3,040 acres
DNR Land Area 'A':	620 acres
DNR Land Area 'B':	180 acres
TOTAL AREA:	3,840 acres

Plot Date: 3-18-03
Information Source: Clark County GIS Data Oct. 2002

Section 5.0

ECONOMIC DEVELOPMENT OPPORTUNITIES ANALYSIS

5.1 Benefits to the Local Economy

The Portland Metropolitan Statistical Area, including Clark, Clackamas, Multnomah and Washington Counties, has a population of 1,779,200 as of July 1, 1997, which is expected to grow to 2,364,000 within the next two decades. This makes the Portland Metropolitan Statistical Area one of the three fastest growing areas in the nation. Clark County is the fastest growing county in Washington and the Portland metropolitan area. The current population, 320,000, has doubled in the last 25 years. The City of Portland, with a growing population of 495,090, is within 15 miles of the base. Growth management plans for the area are focusing on a much higher density in urban areas.

Because of this increasing growth in population and density of development, there is a corresponding increasing need for parks, open space and recreational opportunities accessible to the urban areas. Camp Bonneville provides a unique opportunity to provide an area with dramatically increasing urban density with needed open space. With increased access to areas for physical exercise local residents and tourists will buy more goods and services such as hiking boots, bicycles, outdoor apparel, etc. Computer models have shown that increases in consumer expenditures on goods and services related to physical activity generated more jobs and higher overall labor income than an equivalent increase in expenditures on general goods and services (Conference Board of Canada, 1991). Also, studies have indicated that quality of life opportunities such as access to natural settings, recreational and cultural opportunities and open space, and rivers, greenways and trails are the main factor in business location (US National Park Service, 1990).

Since the 1970's, Clark County has been interested in the Camp Bonneville site as a future regional park. Growth projections indicate a need for the County to provide an additional 850 acres of regional park in the near future. But due to the many pressing needs and increasingly scarce availability of resources, it would have been difficult to acquire the funds to purchase and maintain park acreage. The closure and transfer of Camp Bonneville has provided a unique opportunity to provide this service to the community.

The population growth is also increasing the need for law enforcement services. The Washington State Criminal Justice Training Commission has requested that agencies coordinate and conduct more localized training due to cuts in the state's training budget. Training areas in Clark County are often substandard or non-existent. However purchase of property for increased law enforcement training competes with other pressing County needs. Through a transfer of property and by partnering with Clark College for use of classroom facilities proposed for construction at the site, a training center can be provided for local law enforcement training. Camp Whythicum, the primary firing range training area for the Portland Metropolitan area, has been recently closed due to its proximity to residences, which have grown around the range. Because of the shortage of open space easily accessible to the urban areas, law enforcement

Camp Bonneville Reuse Plan

agencies are concerned about the feasibility of finding areas within reasonable proximity to develop firing ranges. Although the County Sheriff's Office currently has a firing range, it is located in an area that also is expected in the next ten years to become more highly developed, increasing the chances of future closure. Firing ranges are proposed at Camp Bonneville in areas that have been historically used for this purpose, and can be located at a distance that minimizes noise to neighbors and park users, with safety features such as baffling required to ensure compatibility.

5.2 Target Use Analysis

The purpose of this section is to evaluate specific reuses, which possess revenue potential at Camp Bonneville. This analysis examines several reuses, which are most likely to provide significant community benefits and to generate revenues adequate to cover the costs of development and operation of the entire reuse development.

5.2.1 Timber Management

Planning principles for the Camp Bonneville reuse planning process delineate that "there will be no clear cuts except where required for site development and environmental management purposes." As Camp Bonneville timber has not been actively managed since 1981, timber throughout the property has become too dense for the health of the forest. Timber revenues will be used to leverage matching grants that together will provide the ongoing revenues needed for both capital and operational costs.

A Timber Inventory Estimate and Valuation Report, dated November 12, 1997, was prepared for Camp Bonneville (see Appendix B) as part of the data collection and economic analysis process. This report documents the conditions of existing timber stands and estimates the value and revenue potential of harvesting the marketable timber at Camp Bonneville through selective thinning.

This report estimates that timber thinning will yield only enough revenue to adequately support a basic level of park services in the foreseeable future.

A more detailed evaluation is planned to allow LRA prioritization of parcels for cleanup and transfer to ensure the financial viability of the reuse plan.

5.2.2 Rustic Retreat Center/Outdoor School

A rustic retreat center must be simple in nature and provide service primarily to the general public to meet park conveyance requirements.

Expected usage:

Based on an inventory of six conference/retreat centers in Washington and Oregon, a new conference/retreat center (with indoor plumbing in each building and a multi-purpose gathering space) at Camp Bonneville would be expected to attract from 83 to 102 person days per bed assuming a capacity of 80 beds. (A 'person day' is the conference industry's standard method of determining a center's usage and defined as three meals and one night accommodation for

Camp Bonneville Reuse Plan

overnight guests or three meals for day users.) It is also expected that 50% to 70% of the center's total business would be overnight users.

An alternate for of conference/retreat center which utilizes the barracks at Camp Bonneville and Camp Killpack, i.e. bathroom facilities in a remote building and no flexible multi-purpose gathering center is thought to be viable by certain advocates. The existing retreat center/ outdoor schools most relevant to Camp Bonneville in terms of location and service to local school districts are Camp Wa-Ri-Ki and Camp Melacoma, located north of Washougal. These existing camps operate for approximately 8 to 10 months a year. They are nearly 100% utilized from April through August, but during the rest of the year are used mostly on weekends. Based on Camp Wa-Ri-Ki and Camp Melacoma, we expect 12,000 to 17,000 person visits annually to Camp Bonneville if similar facilities and amenities were provided.

Three outdoor schools in Washington and three in Oregon were surveyed and the amount of usage varied considerably. The superintendents from the Clark County school districts have expressed support for future use of Camp Bonneville barracks for outdoor school. It is anticipated that during outdoor school season (April, May, September, October), barracks that are brought up to safety code (buildings have lead based paint) would be utilized to capacity. Overnight use by children will need to be further evaluated to determine whether abatement will be required. The rate charged would be the rate comparable to that charged at the other outdoor school facilities, which are run by non-profit agencies and do not require the extensive capital improvements that are essential at Camp Bonneville. If local school districts use Camp Bonneville for outdoor school, their transportation costs would be reduced from current levels.

The estimated cost to improve Camp Bonneville to a minimal level required to meet code requirements for outdoor school usage is \$486,000 plus an allowance of \$190,000 for septic system upgrades). The estimated cost to do the same at Camp Killpack is approximately \$313,000 plus an allowance of \$190,000 for a septic system upgrades.

Fee Revenue Potential:

The economic evaluation of the use of the barracks for outdoor school and rustic retreat center assumes that a concessionaire will be found to make extensive capital improvements and operate the retreat center facility.

Based on comparable facilities, day user fees for a conference/retreat center at Camp Bonneville are expected to range from \$29 to \$44 per person and overnight users fees from \$53 to \$74 per person.

An outdoor school at Camp Bonneville should be able to charge from \$6 to \$10 per person per day, similar to fees charged by Camp Wa-Ri-Ki and Camp Melacoma.

Operating Costs/Net Operating Income:

Operating costs for a conference/retreat center at Camp Bonneville are expected to range from 85% to 95% of total revenue, based on a survey of 45 conference centers in 20 states. Operating

Camp Bonneville Reuse Plan

costs do not include debt service for capital improvements. After operating expenses, a conference center at Camp Bonneville is expected to have a net operating income of 5% to 15% of total revenue.

According to the director of Camp Melacoma, operating costs usually exceed total revenues in outdoor schools. On this basis, it is expected that an outdoor school at Camp Bonneville would operate at a net deficit. The same net loss is expected for an outdoor school at Camp Killpack but to a smaller degree because it is in better physical condition than Camp Bonneville.

Grants & Volunteer Assistance:

It may become necessary to explore grants, corporate sponsorships, and volunteer assistance, which may be necessary to reduce costs and attract interest by a concessionaire.

5.2.3 Law Enforcement Training Center (LETC)

Expected usage: Classroom facilities shared with Clark College in a new facility to be built, firing ranges, and training areas. If Clark College is unable to attain funds for this construction, and/or if zoning changes are not approved to allow new facility construction, the Sheriff's Office may renovate up to six buildings in the Camp Killpack cantonment area. An equestrian riding ring would be provided in the general vicinity of Camp Killpack, which will be open to the general public when not required for law enforcement training. A physical fitness course and canine training area would also be provided in this area. The canine training area would also be used for training of search and rescue dogs. Firing ranges will include one handgun range, one rifle range, and an area provided for future construction of an indoor firing range (which may be shared with the public). Adjacent to the ranges will be a shooting house, a building which provides law enforcement officers with opportunities to practice making decisions whether or not to fire. Firing ranges will be constructed as needed. Some of the firing range areas identified on the reuse plan are ranges that will be constructed if and when the present off-site firing ranges are closed due to increased development in their areas, or if these firing ranges no longer meet the needs of law enforcement and the public. Some range facilities, however, such as the shooting house and law enforcement rifle range, may be constructed soon after property transfer.

Fee Revenue Potential: For purposes of this study, the LETC is assumed to be a concession which leases land and facilities from the LRA. As such, fee revenue for this use is assumed to go directly to the LETC concession entity. Estimates vary as to the amount of fee income which could be generated by this use. The financial modeling in this report takes the conservative position that the LRA receives no fee income.

Operating Costs/Net Operating Income: Financial modeling of this use assumes a nominal lease in the amount of \$25,000 per year from the LETC concession.

5.2.4 Public Firing Ranges

Expected usage: Although the current shooting ranges in the area meet market demand for the area, it is expected that as the area continues to grow, there is a strong possibility that these

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ranges are at risk for closure in the future. To meet the future needs of the general public, an area has been identified at Camp Bonneville for public firing ranges.

Fee Revenue Potential: This use is assumed to be a concession to a non-profit entity who would be responsible for initial and operating costs and would collect all fees.

Operating Costs/Net Operating Income: A nominal lease amount of \$6,250 per year is assumed for this use.

5.2.5 Regional Park

Expected usage: Due to the amount and cost of infrastructure that will be needed to develop a regional park, the financial analysis has focused on the costs for an initial “starter park.” As infrastructure is developed, certain areas of the park will be developed and made accessible to the public. As timber revenue is obtained and matching grants are received each year, additional development will take place until the area reaches the standards of the other regional parks in the County. Initially, it is expected that picnic areas and campsites will be provided in the Camp Bonneville cantonment area, with trails throughout areas that are identified as “clean” and as safety measures are in place to ensure that areas that are not clean will not be accessible to the public.

Fee Revenue Potential: It is anticipated the regional park will charge parking fees in line with other regional parks in the area.

Operating Costs/Net Operating Income: Current financial modeling indicates that annual operating and maintenance costs to be approximately \$367,000. Projected revenues from park user fees and timber management are anticipated to be cover park operations

5.2.6 Volunteer Labor

Volunteer labor is most appropriate for non-construction activities because of liability concerns by most public agencies. Therefore, it is anticipated that volunteer efforts would be in the areas of fund raising and generating sponsors for capital improvements rather than in undertaking the improvements themselves.

5.2.7 Demolition

Although it is anticipated that users/sponsors will be found for the Camp Killpack and Camp Bonneville cantonments it may, as a last resort, be necessary to demolish all or some of these facilities if meaningful reuses cannot be achieved. The cost to demolish the Camp Bonneville cantonment is estimated to be approximately \$181,000. The cost to demolish the Camp Killpack cantonment is estimated to be approximately \$189,000. The cost to relocate buildings at either camp is estimated to exceed the value of the buildings themselves.

5.3 Economic Development – Jobs Creation

This reuse plan envisions many distinct but inter-related activities. As a direct result of these activities four categories of job creation will result:

- I. Direct employment at the Camp Bonneville Regional Park site

Camp Bonneville Reuse Plan

- II. Direct employment via the capital development of the site, predominately construction trades
- III. Immediate vicinity secondary development enabled through increase of parks land to developed property ratio
- IV. Indirect impact to community businesses resulting from visitors and tourists to the park.

Collectively, the anticipated job creation will be on the order of **28** Full time Equivalents (FTE's). Breakdown of that job creation is envisioned as follows:

I. Direct employment at the Camp Bonneville site

	<u>FTE Creation</u>
1) Timber Management	
a) General Operations	3.0
2) Rustic Retreat Center/Outdoor School	2.0
3) Public Firing Ranges	
a) General Management	1.0
4) Regional Park	
a) Overall Site Management/ Security	
i) General Manager	1.0
ii) Watchpersons	3.0
iii) Utility Maintenance Manager	1.0
iv) Maintenance Workers	4.0
b) RV Campground	2.0
c) Tent Campground	2.0
d) Equestrian Center	4.0
e) Tram Operations	2.0
5) General Store/Cafeteria	
a) Misc. Operations	<u>3.0</u>
Total	28.0

II. Direct employment via the capital development of the site

We have used a computer program ("MGM2 Operating Expense Impacts", developed at Michigan State University) which models Park Revenue based on projected operations. Using the program for this proposed reuse of Camp Bonneville yields an overall snapshot of the impact of park development.

Full development of the site is planned to occur over an estimated 20 years, depending on financial resource availability. In general, annual Capital Development on the order of \$500,000 is practical. This annual construction expenditure will provide employment predominately in the high wage construction trades. Subtracting out the Park employment mentioned in item I above, the net result of "secondary" job creation is **24** FTE's

III. Immediate vicinity secondary development

At present, Clark County Washington is partially constrained from development of the rural area due to an imbalance in the Parks land to Developed land ratio. Development of this site as the

Camp Bonneville Reuse Plan

proposed Regional Park will have a significant impact on that ratio and subsequently allow further development of the rural Clark County area. While it is difficult to identify a number at this stage, Clark County is well known for its' quality of life, affordable housing and stable economy. Through development of the reuse activities at Camp Bonneville, the probability exists for generous job creation resulting from rural development in the surrounding area.

IV. Indirect impact to community businesses resulting from visitors and tourists.

The planned reuse activities will have the potential as a regional magnet for tourism as well as visitors and students associated with the outdoor school and law enforcement training center. Detailed estimates of indirect economic impacts on the local community are beyond the scope of this report. However, based upon U.S. Department of Commerce, Bureau of Economic Analysis, regional economic multipliers for the Portland-Vancouver Metropolitan Region, indirect job creation for service sector employment is typically 1.4 to 1.7 times direct job creation. While difficult to quantify at this stage, it is reasonable to assume a positive community impact on the order of 57 to 65 direct and indirect jobs will be sustained as a result from this reuse plan.

Section 6.0

IMPLEMENTATION

6.1 Preliminary Financial Analysis

The consulting project team conducted a preliminary financial analysis of the preferred Camp Bonneville Reuse Plan. The financial analysis is based on market, financial and cost information that was compiled during the planning process, and is referenced in the plan Appendix document. A Camp Bonneville Reuse Plan Finance Subcommittee served as the technical advisor in formulating development program and cost assumptions.

The Reuse Plan for Camp Bonneville includes a balance of public recreational, educational and law enforcement activities. The key revenue generating element of the Reuse Plan is a program of moderate sustainable Timber Management. The revenue from Timber Management would fund up-front site infrastructure costs for roads and utilities, and could offset site carrying costs and future regional park operations.

The key development components of the site include:

- Regional Park;
- Rustic Retreat/Outdoor School;
- Clark Community College;
- Law Enforcement Training Center (with potential future seasonal public firing range).

Other future uses for the site may include expanded recreational trails and park facilities.

The preliminary financial analysis evaluated the capital and operating cost of the site reuse elements. Because construction of specific project elements (e.g., regional park, law enforcement training center, etc.) will depend on available funding agreements, a preliminary project sequencing strategy was defined. Each of six project sequences was evaluated for its independent ability to break-even. Once all site reuse components are built, Camp Bonneville must be able to break-even or produce a positive net cash flow to the County.

As indicted in *Table S-1 (Appendix F)*, based on the current revenue and cost assumptions, the combined site reuse components are anticipated to produce a modest positive net income stream at build-out prior to redemption of local bond issues.

Camp Bonneville Reuse Plan

Managing county financial risk is critically important during the land conveyance negotiation process. It will be necessary to get assurance from the Army that timber parcels prioritized by the LRA as critical for the viability of the reuse plan will be transferred to the county with the cantonment areas. Potential funding shortfalls during any given year can be mitigated through proper planning of reuse elements and allocation of timber reserves to a special fund for Camp Bonneville management and improvements.

The Reuse Plan for Camp Bonneville not only minimizes county risk, but also is designed to appeal to a broad array of public interests, and a variety of recreational users. The plan, while designating areas for specific development concepts, provides flexibility in how the county can phase development in a manner that is consistent with available funding, and with final designs that are sensitive to environmental features and adjacent land uses.

Additional detailed information on the financial analysis for Camp Bonneville is included in the Appendix document.

6.2 Acquisition Alternatives for Camp Bonneville

There are a number of ways for a community to acquire surplus base property. At Camp Bonneville, all transfer options will be through conveyances. Available methods considered for the Camp Bonneville property acquisition include the following:

6.2.1 Parks Conveyance

The Federal Lands-to-Parks Program assists public agencies to acquire surplus Federal land for public park and recreation use. The Federal Lands-to-Parks Program is authorized by the Federal Property and Administrative Services Act of 1949, as amended [40 U.S.C. 484, 203(k)(2)]. This land is transferred to a public agency at no cost with the condition that it be used for parks and recreation in perpetuity. The program has two goals:

1. Provide opportunities for the public to participate in a variety of recreation activities, such as hiking, biking, camping, picnicking, cross-country skiing, snowmobiling, horseback riding, swimming, boating, and playing organized sports
2. Protect and provide access to natural resource areas, including lakes, forests, rangeland, wetlands, open space, and beaches.

National Parks Service staff have visited Camp Bonneville and are aware of the various reuse at the site. Once Federal property has been conveyed, the National Parks Service is responsible for monitoring the use of the land to ensure it is managed according to the terms and conditions of the transfer. The monitoring component of the program ensures public access for recreational use and the continued protection of the natural and cultural resources located on the property. Because of serious concerns by the LRA and the National Parks Service, the FBI firing range area must be leased through the County rather than transferred to the FBI.

The LRA would also need to request sponsorship by the National Parks Service of public and law enforcement firing range areas. To promote park and trail usage, firing ranges will be open

Camp Bonneville Reuse Plan

only six months each year during non-peak park usage months, with no usage on weekends year-round, resulting in firing ranges being open only 35% of the year. During times of firing range closure, a large area of trail and wetland education areas will be more inviting due to elimination of gunfire noise. Firing ranges will also only be constructed as they are needed by both law enforcement and the public. Some of the firing ranges are planned for Camp Bonneville because of expectations that the firing ranges currently operating off-site may be forced to close in the future due to continued development in the adjacent areas. Until (and if) those closures occur, some of the areas designated for firing range use will remain natural areas, with sponsorship by the National Parks Service necessary.

6.2.2 Educational Conveyance

Public Benefit Transfers of surplus Federal real property are made pursuant to provisions of the Federal Property and Administrative Services Act of 1949 (P.L. 81-152), as amended, [40 U.S.C. 484(k)(1)]. The Act gives authority to the Secretary of Education to sell or lease such property at a price, which takes into account the public benefit, which will accrue, to the United States because of eligible educational use.

The sale price of a property is its fair market value at the time of transfer. The actual amount of cash payment required of a successful applicant is determined by applying a public benefit discount allowance against the sale price. Discounts for "on-site" educational transfers range from 40% to 100%, but typically made at a full 100 percent public benefit. The total public benefit allowance accorded a transfer will vary depending upon the educational use proposed and the degree of need.

All public benefit transfers for educational uses are subject to certain terms and conditions which remain in effect for a specified number of years. For on-site properties the usual Restriction Period is 30 years.

During the Restriction Period:

1. The property must be used continuously for the approved educational purpose(s), either as originally approved in the application to acquire the property, or as may be later approved in an amendment to the approved utilization plan.
2. The property cannot be sold, leased, rented, mortgaged, encumbered or disposed of, in any way, without the prior written consent of the Government. (The recipient can, however, "buy out" the remaining unused value of the conveyed property.)
3. The educational recipient (Transferee) must file a brief annual utilization report and certification of compliance with the Department of Education (usually 2 pages or less).
4. The Transferee must remain tax supported or nonprofit and tax exempt as was required at the time of transfer.
5. The Transferee must comply with the usual statutory requirements regarding

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nondiscrimination.

Although they have not visited Camp Bonneville, Department of Education staff have been regularly informed of the proposed reuse areas at Camp Bonneville that may be sponsored as an education public benefit conveyance. The Department of Education sponsorship may be requested for the Clark County law enforcement/Clark College environmental education classroom building.

6.2.3 Public Safety Conveyance

The LRA will also explore the option of sponsorship of law enforcement training areas through a General Services Administration public safety public benefit conveyance approved by the Department of Justice. Rules regarding this transfer are now being drafted and will be reviewed by the LRA when they are made available. Property transfer authority for Justice Department transfer authority will terminate on December 31, 1999. Unless this authority is extended, the LRA will need to apply for sponsorship in the very near future if this sponsorship is needed.

6.2.4 Special Legislation

Ideally Camp Bonneville would be conveyed as a single event.

There are three reuse options that may require special transfer consideration by the General Services Administration (GSA), with the alternative being special legislation a backup consideration should difficulties arise in their transfer.

The first is the law enforcement firing range area. The LRA will be requesting a sponsorship of these range areas through a PBC sponsored by the National Parks Service. The firing range usage has been limited to a maximum 35% of the year to open more areas for trail usage throughout the site and provide a quieter environment for park users. Firing ranges will also only be constructed as needed, remaining natural open space areas until (and if) firing ranges are constructed. An NPS sponsorship also provides the community with flexibility to close the ranges or further limit their usage days and hours due to any effects of noise on park usage and viability.

The second area of concern is the Camp Killpack barracks buildings. The plan for these buildings is for a rustic retreat center and outdoor school usage, with sponsorship by the NPS. If, however, the proposed new building for Clark College and law enforcement training fails to be rezoned for this usage, law enforcement has requested that up to six of the Camp Killpack barracks buildings be used for law enforcement training. This would require a change in sponsorship to an education or law enforcement sponsorship, which is not currently the usual practice in federal land conveyance.

A third area of concern is the zoning restrictions for the proposed Clark County law enforcement/Clark College classroom facility. While a zoning change may allow construction of the building, there is a risk that the zoning restricting parcel size to 40 acre minimums may not change. The 40 acres surrounding the classroom building are critical park usage areas.

6.2.5 Conservation Conveyance

Under 10 U.S.C. 2694a, the Secretary of the Army is authorized to transfer BRAC bases at no cost, provided that the property is used for natural resource conservation. As discussed in section 5, this reuse plan will contribute significantly to the open space conservation for the surrounding area of Camp Bonneville. A Conservation Conveyance would transfer the site under a single conveyance and does not require third party sponsorship.

6.2.6 Acquisition Strategy Summary

As of November 2005, the LRA's preferred conveyance mechanism is the Conservation Conveyance. This type of conveyance is commensurate with the proposed reuse activities and resultant open space designation. The open space creation is consistent with the Rural setting of Camp Bonneville.

It is recommended that the entire property be transferred to Clark County to ensure a holistic management of the site. The LRA will seek a Conservation Conveyance for the acreage at Camp Bonneville. Acreage allows for extensive parks and open space, including an outdoor area used for law enforcement training (shared with the public) and an area to be possibly leased on a long term basis to the FBI for its firing range. This transfer will be in perpetuity. Leased areas can be approved for individual users, such as the FBI, but subject to the agreed upon terms and conditions between the County and its tenants.

The LRA will provide the Army with an update to the reuse plan which will refine the location of the reuse activities that are critical to ensure the viability of the reuse plan. Although there are some areas where reuses must be located for various reasons (such as firing ranges because of location for noise and safety), the LRA is willing to work with the Army to find comparable reuse locations for reuses that are found to be located in areas heavily contaminated with UXO, or in areas that are found to be wetlands, significant riparian areas, have cultural significance, or have endangered/threatened species. The LRA also will strive to identify timber parcels that are in need of thinning and whose revenues are essential for funding necessary infrastructure, operations, and for matching grants.

The LRA will also continue to evaluate liability issues to ensure that the County is indemnified for damages that are incurred in areas that have been transferred, have been identified as clean, and where the County/LRA has not violated any institutional controls agreed upon prior to transfer. (Example: If deed restrictions allow usage, but restrict digging to a three foot level, and an injury occurs from a surface UXO missed in the cleanup process, the County would need assurance of indemnification.) Before agreeing to accept transfer of property, the County will evaluate factors such as the risks associated with acceptance of the various parcels, the timeline for cleanup and transfer, the restrictions/institutional controls placed on property usage, and the Army's security measures for property awaiting cleanup. It is expected that the Army will at a minimum conduct a surface sweep and cleanup of all properties transferred, unless an Early Transfer is conducted*. The County is not interested in accepting transfer of property known to be contaminated with UXO, and expects the Army to provide adequate security to prevent public access to these sites*.

** The early transfer process delineates the identification of contaminated property in the transfer documents*

6.3 *Permanent Implementation/Management Organization*

At the conclusion of the base reuse planning phase, the local redevelopment authorities (such as the Camp Bonneville Local Redevelopment Authority) created for planning the base reuse inevitably transition into permanent property management and development “implementation LRA.” This organizational transition from a planning LRA to an implementation LRA is a normal step in the military base reuse process.

In the case of the Camp Bonneville property, the Board of Clark County Commissioners should become the implementation local redevelopment authority and should take permanent title to the base property. The Vancouver-Clark Parks & Recreation Advisory Committee will provide oversight to the site management of all planned reuses. A public advisory body, meeting quarterly, should be created among the several Camp Bonneville users and neighbors as well as the adjoining educational entities, to provide the Vancouver-Clark Parks & Recreation Advisory Committee input on the long-term management of the site.

Section 7.0

OTHER ISSUES

7.1 Future Modifications of the Reuse Plan

There are a number of factors, which could impact this Reuse Plan and create the need to modify this plan at a future time:

7.1.1 UXO

It was initially expected that UXO sampling information would be available to the LRA prior to reuse plan preparation. Completion of the UXO sampling report has been delayed until late August, 1998. The EE/CA report, due in January 1999, will also be an essential planning tool. Based on the archive search, the LRA has made assumptions on locations of reuse activities. The archive search addendum has also not yet been completed; the initial search was incomplete because it did not include interviews with neighbors and others familiar with the history of Camp Bonneville. The LRA has significantly limited development (which lowers cleanup costs) and will work with the Army to, wherever possible, relocate developments which have been planned in any areas that are found to be more contaminated than originally anticipated. UXO information will also be essential in determining which parcels will be accepted by the County for transfer.

7.1.2 Endangered and Threatened Species

Access to the site by U.S. Fish and Wildlife, State Fish and Wildlife, and the Clark County biologist has been limited by the incomplete UXO sampling process. When these agencies gain access to the site and present their findings with regard to endangered and/or threatened species, the Reuse Plan may need to respond.

7.1.3 New Salmon and Trout Regulations

It is possible that new federal regulations regarding protection of sensitive lands associated with salmon and trout habitat will impact the Camp Bonneville site. If and when this occurs, the Reuse Plan may need to be modified to respect these constraints.

7.1.4 Wetlands and Riparian Areas

When access is allowed to the site, delineation of wetland and riparian areas may require changes to the location of some uses in the Reuse Plan. This plan is currently based on locally available maps indicating, without detailed specificity, the location of wetland zones.

7.1.5 Archaeological Findings

Approximately 700 acres at Camp Bonneville have been identified in a March 1998 site map (**Figure 10**) for cultural/archaeological evaluation. These studies are tentatively planned for 2000-2001 (a timeline the Army has expressed support in accelerating), assuming these areas will be identified as "clean" for UXO. These areas coincidentally are areas identified as areas of relatively high public use and access. If these studies uncover significant archeological findings, it is likely that the Reuse Plan may need to be modified.

Camp Bonneville Reuse Plan

7.1.6 Transfer Restrictions

It is possible that deed restrictions or other institutional controls may be attached to the transfer of property to the LRA. In that event, the LRA will need to evaluate the institutional controls to ensure that the proposed reuses and transfer of the property remain viable.

7.1.7 Zoning

At least two components of the Reuse Plan are expected to require a zone change prior to development: the Clark College facility and RV camping. If the rezoning process involves additional constraints, the plan may need to be updated in response. If rezoning is not approved, areas identified for a Clark College facility, as well as some of the Camp Killpack barracks buildings, may require a change in federal agency sponsorship.

7.1.8 Timber Harvesting Restrictions

Any restrictions disallowing timber harvesting will prompt reconsideration of the reuse plan. Revenue from timber thinning is critical to the success of the reuse plan. The cleanup time line and subsequent transfer of properties will also affect timber revenue (and infrastructure financing). An EECA is at this time is scheduled to be completed by January 1999.

7.1.9 Sewage System

Following review of the draft operations manual, site survey and remediation study (to be completed later this year), and discussions with DOE, the Reuse Plan may need to be modified.

7.1.10 Lead Contamination

Tests were requested two years ago on lead levels in water entering and leaving Camp Bonneville. Those results are expected the fall of '98. If lead levels are at an unacceptable level, the LRA will need to reconsider liability and environmental factors which could result in elimination of firing ranges in its reuse plan.

7.1.11 Liability Issues

At this time it is unclear whether the County will be liable (when abiding by the deed restrictions) for damages from UXO on the transferred property. The LRA hopes that UXO will be identified in CERCLA 330 (h)(c) as being covered in providing the County indemnification upon transfer. Availability and cost for insurance for UXO risk will be assessed after the UXO report is issued to determine the County's risk in accepting transferred property.

7.1.12 Other Environmental Contamination

The Army Corps of Engineers is continuing its evaluation of various areas at Camp Bonneville such as landfills, burn areas, maintenance sheds, etc. While no unremediable, serious contamination has yet been identified, there remains the possibility that contamination may be found which could warrant changes in locations of proposed reuses.

7.2 Safety

Camp Bonneville Reuse Plan

Due to concern for public safety, Senator Patty Murray sponsored legislation which required the Army to provide the community with information by November 1997 on the extent and risks of UXO at the site. Much of the border of Camp Bonneville is unfenced. Because of permission granted to the public for use of the site for hunting, outdoor school trails, picnics, and equestrian usage, many in the community are skeptical of UXO risk. Trespassers are frequent at the site. Since UXO sampling has begun, security at the site has been increased, however this security is tied directly with cleanup efforts and may not extend into the future. Based on the UXO found on the surface of the sample grids, the local community remains concerned and believes that the Army should continue to provide adequate security for all military-owned properties at Camp Bonneville.

7.3 Fire

Fire inspection of all structures by the Army needs to be conducted on a regular basis. Roads have been deteriorating due to reduction of maintenance funding for vegetation spraying, increasing erosion and reducing accessibility throughout the site in the event of a fire. Since the Camp Bonneville area is part of the Yacolt Burn area (and two additional major burns), and due to the recent extensive residential development in the Camp Bonneville vicinity, access roads for fire suppression are critical for health and human safety.

7.4 Site Maintenance

Buildings are deteriorating, and roads/trails are becoming overgrown or eroded due to reductions in Army maintenance levels.

Appendix A

Site Inspections:

Camp Killpack

Map of Camp Killpack

Photos of Camp Killpack

Camp Bonneville

Map of Camp Bonneville

Photos of Camp
Bonneville

Water Systems

Sanitary Sewer

Roads

Photos of Roads

Infrastructure Report

Site Inspection, Buildings Camp Killpack

Officer's House: T4155

Barracks Buildings: T4314, T4316, T4325, T4327, T4377, T4345, T4348, T4356, T4366

Men's and Woman's Latrine: T-4347

Laundry: T-4364

Classroom and Weight room: T4368 (a converted barracks)

Shop: T-4387 (a converted barracks)

Kitchen and Dining: T4389

Offices: T-4398

Shop: T4475 (a converted barracks)

Fire Station: T-4577

Map of Camp Killpack

Photos of Camp Killpack

A visual observation tour was conducted to determine the level of current code compliance in the areas of ADA, fire safety and general safety as described in the consultant's scope of work. Specific recommendations for improvements to these structures will be dictated by the actual uses which the structures ultimately house, and the code compliance rulings rendered by the regulatory agencies having jurisdiction over the site. Cost estimates for facility upgrading will be conducted during the reuse planning phase of the scope of work and will depend on the adaptive reuse assumptions generated during the reuse planning phase of the project.

1. General

The buildings at Camp Killpack are not in compliance with current building codes. The buildings are, however, generally safe structures and could be used for a variety of activities without significant upgrading given a cooperative stance by local building code agencies. According to Army staff, the Corps of Engineers undertook a retrofit of buildings in Camp Killpack in approximately 1990 during which time a number of structural, mechanical and electrical improvements were made. At this time the construction documents have not been found by Camp Bonneville staff so no review of those drawings and specifications has taken place.

2. Site Improvements

Walkways

Most walkways are poured in place concrete with a light broom or textured finish. The slopes on these walks are, in certain areas, greater than that allowed under ADA regulations. Corrective measures might include extending the length of run on walkways to lessen the slope and/or installing handrails to allow slopes of steeper gradients. Most buildings do not have ADA compliant egress and, if put to public use, would need to have entry modifications

constructed to overcome this deficiency.

Open Areas

It appears that the open areas are free of drainage problems or other impediments to future use.

Storm water sheets to the south and is intercepted at various points by what appear to be frenchdrains which Army staff indicates is piped to the south side of the main entry road.

Gravel Drives

Areas between rows of buildings are graveled and appear to have born the weight of military vehicles well over the years.

3. Concrete Systems

Foundations and Floor Framing Systems The barracks type buildings bear on concrete pier foundations approximately 12"-14" square. 6x6 posts bear on the pads. There are 4 bearing lines, one at each edge, and two, evenly spaced in the middle. 2x6 cross bracing between the outer bearing line and the closest "middle" support alternates between every other post. Many of the original posts have been replaced recently and now bear on a small asphalt shingle on the pad.

A general deficiency in the floor framing systems of all but the men's and women's latrine is the lack of sufficient header size between perimeter bearing posts to carry the imposed floor loading. Therefore there is observable floor sag along the perimeter walls of the wood floor buildings.

The men's and women's latrines, are constructed on conventional spread footings with stem walls and slabs on grade and appear to be in good overall condition. it is anticipated that these structures are in compliance with current buildings codes.

4. Masonry Systems

No significant masonry construction systems were observed at Camp Killpack. There is a masonry fireplace in the officer's house (T-4155) which appears to be in good condition.

5. Metal Systems

No significant metal construction systems were observed at Camp Killpack.

6. Wood Systems

Roof Structure The roofs of the barracks and other older, original buildings are 2x6 site fabricated trusses at 24" o.c. The ridge board is a 1x6 and the bracing members are 2x4. Skip sheathing was used as the substrate, hinting that the buildings were originally roofed in cedar shakes. A single 2x purlin ties the "trusses" together. No observable method of roof diaphragm or diagonal bracing was visible in the attic space. The roof structure barracks buildings is unusual in that the walls do not come up and seat themselves at the base of the truss, rather

they are further out on the "tails" of the trusses. This is causing some apparent structural stress in the members, as the more central trusses show evidence of "bowing" just above the bearing point and below the bottom chord, or in this case, collar tie.

Fascias and Soffits

The rakes are an anodized aluminum flashing. About half of the paint has flaked off as a result of the incompatibility of the paint with the metal surface. The only other "fascia" observed, is the pressure treated gutter board. Eaves are exposed without soffits.

Entry Porches There are two styles of entry porches at barracks type buildings: enclosed and open. All the porches on the west side of the site are open. About half of the east porches are open. Porches are a simple shed with 4x4 corner posts. Those on grade have concrete pads for floors, and those crossing grade use 3x6 t&g for flooring which is generally highly worn. Enclosed porches have a single window of 1/4" single strength glass which is a potential safety hazard because it is located in the direction of travel outside the exit door. All interior surfaces of the porch are exposed wood. Enclosed porches are only closed on three sides, and the open side alternates from north to south from building to building.

7. Thermal and Moisture Protection

Roofing

The roofing on all the buildings in this area is a dark gray 3-tab asphalt shingle. There is evidence of a few roof patches where new shingles have been installed. There is also evidence of wind damage causing lifting of shingles, especially on the south facing slopes. Pine needles and other tree debris builds up on the roofs and needs to be maintained on a regular basis. The roof pitch appears to be 8:12 with approximately a 1-1½ foot overhang.

Building Insulation

Attic spaces have unbacked fiberglass insulation batts approximately 7-9 inches in depth. No vapor barrier was observed. The approximate R value is R= 11. Walls appear to have been recently insulated by boring holes in the exterior siding and filling the stud cavities with insulating material. The exact type of wall insulation is unknown but normal insulating materials would produce an R=9-11 value. No insulation was observed in the floors of these buildings.

Roof Vents and Jacks

Painted wood louvers, approximately 1'6" x 2'-0" square were observed on each gable end of most buildings. Eave venting was minimal and in some cases non existent. Small circular

perforated vents, approximately 3/4" in diameter were found above most windows and were more often than not, clogged with paint.

Gutters

Gutters are a factory formed and finished sheet metal with an ogee profile and spike and ferrule mountings. The gutters were observed only on the south (uphill) side of the buildings. Buildings further up the slope had increasingly more tree debris clogging the gutters. Some of

the gutters have been bent from the excess debris clogging them. Gutters are mounted to a pressure treated 1x6 member that was added to the rafter tails in recent times. It is thought that these buildings have only recently received gutters. There are continuous gravel french drains directly below the roof edge on the north and south sides. These drains appear to pick up the roof water which is not channeled through downspouts.

Downspouts

One downspout per building can be found on the west side of the gutter. It is a smooth sheet metal with a factory coat finish and a rectangular profile. The downspouts drain into the storm drainage system.

8. Doors and Windows

Windows

Windows are double pane clear glass in a factory painted aluminum frame. The windows are single hung with a screen in the lower frame only. Window treatment consists of a single pull down recoiling shade. Window size is approximately 1'-6" x 3'-0". Windows are in good condition and appear to have been installed as part of a general retrofit contract in recent years.

Doors

Exit doors, in general, are not equipped with panic hardware devices.

9. Finishes

Exterior Surfaces

The exterior siding is a 1x6 shiplap siding applied horizontally. The wall structure is assumed to be 2x4 stud at 24" o.c. since there are two sets of insulation hole caps every 24" o.c. The paint is peeling, especially at the lower portions of the walls, presumably because of water splashing from unguttered eaves or plugged gutters overflowing. The siding nails are rusting and beginning to stain the siding. A few of the insulation plugs are beginning to loosen. There is no observable undercoating/priming to the siding paint. Foundation skirts are plywood with 1x bats. There is no evidence of any lateral loading strategies, or shear wall diaphragms as part of the exterior walls. Occasional rot is evident at those locations where untreated wood comes into contact with concrete footings with protection.

Interior Surfaces

Walls and ceilings are a 1/4" press board or plywood with 1x4 seam bats. Walls and ceilings are painted in a semigloss-satin enamel. Paint around the furnaces is discolored from heat and furnace gasses, but, overall is in good condition. Walls are cold to the touch, especially near the roof. This could be evidence of poor venting or sweating on the interior surface of the walls and eaves.

Flooring

An off-white composition flooring is typical of the units. The flooring is in good condition, however should be analyzed for asbestos. It is assumed that the tile is laid over 2x t&g decking, but there is no way to be sure without cutting samples.

10. Specialties - Not used

11. Equipment

Building equipment has been inventoried by others and was not part of the scope of this inspection. In general, the commercial kitchen appears to be in good operating condition.

Kitchen hoods are protected by gas fire suppression systems. Coolers/freezers appear to be in good condition although they and all other equipment have been de-activated due to base closure.

12 Furnishings

Furnishings have been inventoried by others and were not inspected as part of the scope of this work.

13. Special Construction - Not used.

14. Conveying Systems - Not used.

15. Mechanical

Heating

All buildings are heated by means of electric fan coil units or electric radiant heat wall units which appear to be relatively new. Interviews with Camp Killpack maintenance staff indicate that these units have worked adequately for their historic function of providing minimal heat to the barracks areas. However, no outside makeup air source was observed in the buildings. The boiler for the laundry is fire by oil according to Army staff. The oil source was not observed.

Plumbing

All fixtures appear to be in generally good repair by visual observation. Interviews with Camp Bonneville staff indicated that inside plumbing has not been a problem at this site.

16. Electrical

Power and Signal

All buildings are served by grounded public power supplies. The barracks buildings are typically served by a 60 amp panel. The kitchen/dining building is served by an 800 amp panel. The panel size in the men's/women's latrine could not be observed but the domestic hot water boiler is electrically fired. Electric Fire detectors are present.

Lighting

Barracks buildings are lit by two rows of 4" junction boxes with ceramic bulb holders and exposed bulbs. Some are fed with exposed metal conduit, and others are fed by concealed wiring.

Dining and kitchen lights are fluorescent as are those in the converted barracks buildings being used for offices, shop, classroom and weight room, Lighting in the men's and women's latrine is fluorescent. Exit lights are present in all buildings.

Site Inspection, Buildings Camp Bonneville

Barracks Buildings: T-1826, T-1828, T-1837, T-1847, T-1857, T-1867, T-1911, T-1920, T-1922, T-1932, T-1942

Recreations Building: T-1940

Storage Building: T-1930

Kitchen and Dining: T-1848

Gas Chamber: T-1834 (to be demolished)

Women's Latrine: T-1833

Men's Latrine: T-1934

Wood Storage: T-1963

Recreation & barracks: T-1980

Map of Camp Bonneville

Photos of Camp Bonneville

A visual observation tour was conducted to determine the level of current code compliance in the areas of ADA, fire safety and general safety as described in the consultant's scope of work. Specific recommendations for improvements to these structures will be dictated by the actual uses which the structures ultimately house, and the code compliance rulings rendered by the regulatory agencies having jurisdiction over the site. Cost estimates for facility upgrading will be conducted during the reuse planning phase of the scope of work and will depend on the adaptive reuse assumptions generated during the reuse planning phase of the project.

1. General

The buildings at Camp Bonneville are not in compliance with current building codes. The buildings are, however, generally safe structures and could be used for a variety of activities without significant upgrading given a cooperative stance by local building code agencies. The general condition of structures at Camp Bonneville is of a lower quality than that of Camp Killpack. This is due primarily to the fact that the Corps of Engineers did not conduct a retrofit of systems in 1990 as they did at Camp Killpack.

2. Site Improvements

Walkways

Concrete walkways are poured in place concrete with a light broom or textured finish. The

slopes on these walks are, in certain areas, greater than that allowed under ADA regulations. Corrective measures might include extending the length of run on walkways to lessen the slope and/or installing handrails to allow slopes of steeper gradients. Most buildings do not have ADA compliant egress and, if put to public use, would need to have entry modifications constructed to overcome this deficiency.

Open Areas

It appears that the open areas do not consistently exhibit free drainage characteristics and there are several localized drainage pockets which have caused rot in the lower portions of wood structures. Storm water sheets to the south and is intercepted at various points by what appear to be french drains. The destination of these drains is undocumented.

Gravel Drives

Graveled drives between groups of buildings appear to have borne the weight of military vehicles well over the years and are therefore assumed to be adequate for future light vehicle usage.

3. Concrete Systems

Foundations and Floor Framing Concrete pier foundations are approximately 12"-14" square and are mixed in with an occasional strip foundations. 6x6 posts bear on the individual concrete pads. Built up beams of 2-2x6 members carry 2x6 floor joists with 2x floor decking. There are 4 bearing lines for the typical building, one at each edge, and two, evenly spaced in the middle of the floor system. Many of the original floor posts have been replaced recently and now bear on a small asphalt shingle on the concrete pad. Observable insulation is between the floor joists and is held up by wire screen nailed to the bottom of the floor joists. Not all building's crawl spaces were accessible to inspect for insulation.

Buildings in this complex generally had significant floor settlement at the perimeter walls due to undersized beams which span between foundation posts along the outside walls.

4. Masonry Systems

Several buildings have fireplaces constructed of local basalt stone. The craftsmanship in of high quality but it is highly likely that there is inadequate reinforcing to meet current seismic codes. There is anecdotal evidence that these fireplaces were constructed by Italian prisoner's of war and may have historical significance.

5. Metal Systems

No significant metal construction systems were observed at Camp Bonneville.

6. Wood Systems

Roof Structure The roofs of these buildings are typically constructed of 2x4 site fabricated trusses at 24" o.c. The ridge board and top chord are a 2x6 and the bracing members are 2x4. There are additional 2x4 collar ties added half way up the truss and they do not appear to have been part of the original construction. Gusset plates are nailed to the trusses from the bearing

point at the walls to approximately 1/3 the way up the truss. Gusset plates occasionally appear at the mid-collar tie. Diaphragm plates with access holes cut in them were observed at numerous locations. These diaphragms cover the entire truss at the midpoint in the building directly above the wing walls and appear to have been installed in an attempt to arrest building movement or comply with building code requirements. Skip sheathing was used as the substrate, hinting that the buildings were originally roofed in cedar shakes.

Fascias and Soffits

The building rakes are an anodized aluminum flashing. About half of the paint has flaked off of the rakes as a result of the incompatibility of the paint with the metal surface. The only other "fascia" observed, is the pressure treated gutter board. Eaves are exposed without soffits.

Entry Porches

Those on grade were concrete pads, and those crossing grade were t&g, highly worn. Some of the wooden steps were broken. Small sheds extend over the door supported by 1-1/4" +/- solid plywood supports. The front edge of the shed is guttered to divert the water to either side. Hand rails for steps are 2x6 rails on 4x4 posts, no balusters or intermediate rails exist.

7. Thermal and Moisture Protection

Roofing

The roofing on all the buildings in this area is a dark gray to black 3-tab asphalt shingle. Approximately 50% of the buildings have had their roofs replaced in 1993 according to Army staff. Moss, pine needles and other tree debris builds up on the roofs and needs to be maintained on a regular basis. Roofs that have not recently been renovated have more debris than the others. The roof pitch appears to be 8:12 with approximately 9-inch overhang.

Building Insulation

Attic spaces have unbacked fiberglass insulation batts approximately 7-9 inches in depth. No vapor barrier was observed. The approximate R value is R= 11. It is unknown whether the walls of the buildings at this camp are insulated and Army staff was unaware of any insulation program in recent years. Floor insulation was observed in those buildings whose crawl space could be readily accessed.

Roof Vents and Jacks

Anodized aluminum louvers, of varying size, were observed on each gable end of the buildings. On the building with the fireplaces, there are two smaller eave vents instead of one. Eave venting is minimal. Small circular perforated vents, approximately 3/4" in diameter were usually found above windows and were more often than not, clogged with paint.

Gutters

Gravel french drains run directly below the roof edge on the long sides to accept roof water.

8. Doors and Windows

Windows

Windows are 6 panel single pane wood frame hopper opening to the inside. They are painted and have wood framed screens. Window treatment consists of a single pull down recoiling shade. Window size is approximately 1'-6" x 3'-0". Windows are in generally good condition.

Doors

Exit doors, in general, are not equipped with panic hardware devices.

9. Finishes

Exterior Surfaces

The exterior siding is a double layered cedar shake, stained. The base wall structure is assumed to be 2x4 stud at 24" o.c. based on observed nailing patterns. Foundation skirts are T-111. Corner boards are 1A painted, brown. The cedar shake siding on these buildings is in acceptable condition but is nearing the end of its useful life.

Interior Surfaces

Walls are t - 111 plywood in the barracks and drywall in the mess hall and classroom buildings. Ceilings are drywall. Surfaces are painted in a semigloss to satin enamel. Paint around the furnaces and diesel heaters is discolored from heat and furnace gasses, but, overall is in good condition.

Flooring

Both oak flooring and an off-white composition flooring is typical of the units. The flooring is in good condition, however the composition flooring should be analyzed for asbestos. It is assumed that the tile is laid over 2x t&g decking, but there is no way to be sure without destructive testing.

10. Specialties - Not used

11. Equipment

Building equipment has been inventoried by others and was not part of the scope of this inspection. In general, the commercial kitchen appears to be in good operating condition. Kitchen hoods are protected by gas fire suppression systems. Coolers/freezers appear to be in good condition although they and all other equipment have been de-activated due to base closure.

12 Furnishings

Furnishings have been inventoried by others and were not inspected as part of the scope of this work.

13. Special Construction - Not used.

14. Conveying Systems - Not used.

15. Mechanical

Heating

Buildings are generally heated by means of oil furnaces. These furnaces do not appear to have any outside air provisions and according to Army staff are prone to smoking as evidenced by staining of the walls and ceilings in their vicinity. The installation of these units will in all probability not meet with approval by local building code agencies.

Plumbing

All fixtures except those noted below appear to be in generally good repair by visual observation.

16. Electrical

Power and Signal

All buildings are served by grounded public power supplies. The barracks buildings are typically served by a 60 amp panel. The kitchen/dining building is served by an 800 amp panel.

Lighting

Lighting varied from building to building. The mess hall and classroom buildings used older style florescent bulbs. The barracks buildings had 3 rows of exposed bulb incandescent bulbs mounted on 4" j-boxes.

17. Other Observations

1. Building T- 1940 has localized roof structure failure.
2. Building T- 1848 has recently had the ceiling renovated; had new floor tile installed in approximately 1988; had the ranges redone in 1988 according to Army staff.
3. Building T-1857 has major ceiling sagging.
4. Buildings T- 1828 and T- 1920 were barracks for higher ranking army staff and have higher quality fir floors than other buildings.
5. Buildings T-1833 and T-1934 have are in poor condition internally due to moisture damage from unvented showers and toilet areas. The plumbing fixtures in these buildings are reported to in poor condition as well by Army staff.

Water Systems, Camp Killpack and Camp Bonneville

Visual observations, a review of existing construction documents and as-builts, and interviews with Army staff were combined to determine the capacity of the current water systems as

required by the scope of work. Recommendations on improvements necessary to support alternate site uses and the associated estimates of construction cost for proposed uses will occur in the reuse planning phase of the work scope.

Existing Conditions:

There are two well sites, two reservoirs, and two independent water systems serving Camp Killpack and Camp Bonneville.

The first site is located approximately 70 vertical feet above Camp Killpack and about 800 feet due north. The well was drilled in 1949 and is located about 50 feet from the reservoir. According to the Army maintenance staff and well reports, the well produces approximately 32 gpm. This well fills an unlined in-ground concrete reservoir through a 6 inch ductile iron pipe. The reservoir is covered by a wood framed metal roof. The volume of the reservoir is approximately 1,350 cubic feet or about 10,000 gallons. The water is pumped out of the well and chlorinated by an onsite Sodium Hydro Chlorinator. The water pressure at Camp Killpack is charged by the static head from the reservoir to the camp. The water pressure at the camp is approximately 30 psi based on the height of the reservoir above the camp.

From the Army maintenance staff on site the following information was obtained:

1. When the camp is occupied and groups of army personnel are taking showers the water pressure drops to a trickle.
2. The well and reservoir system do not keep up with the demand at the camp generated by traditional Army usage.
3. The reservoir is undersized to handle the demand volume that is placed on it.

The second water system is located at the site called Camp Bonneville. The reservoir is located about 80 vertical feet above the camp and 800 feet due north. The reservoir was built in the late 1940's. The reservoir is an in-ground, unlined concrete facility covered by a wood-framed metal roof. The capacity of the reservoir is about 6,900 cubic feet or about 51,700 gallons. The water system is pressurized by gravity flow from the reservoir to the camp. The water pressure at the camp due to the hydrostatic head is approximately 35 psi.

According to Army staff, Camp Bonneville has not experienced any water shortages. The original well that filled the reservoir was drilled in the late 1940's. The new well site is located at the east end of Camp Bonneville and was installed in 1978. The water is chlorinated by a Sodium Hydro Chlorinator and pumped up to the reservoir via a 5 HP pump and a 4 inch galvanized pipe. The new well system is reported by Army staff and well reports to have a capacity in excess of 100 gpm.

Army staff indicates that at both of the camps none of the valves in the water system are in functioning condition. When maintenance crews have attempted to shut off a valve at either camp, it will not move or it breaks.

The As-Built plans received from the Army are out of date, incomplete, or inaccurate. Some of the information is correct but none of it can be relied on to be accurate.

Army staff indicated that the water quality from both reservoirs passes all of the health department requirements. There was not any documentation on site to verify the water quality.

Currently there are no fire hydrants or other fire suppression facilities on site at either camp. The local county fire district is currently responsible to respond when a fire event occurs.

Conclusions:

1. The existing water system at both camps from the reservoir to the buildings has exceeded it's design life and should be abandoned and replaced.
2. The existing wells and pumps appear to be in good working order and are of value to maintain. The size of these facilities may need to be upgraded depending on the future uses.
3. The existing chlorination system is adequate but may need to be replaced or upgraded in the next ten years as it is reaching its design life.
4. The existing reservoirs appear to be in good shape. Historically in- ground concrete reservoirs are prone to cracking and leaking over time. These reservoirs should be drained and checked for cracks. If cracks do exists they should be sealed, the reservoir should be lined, or if the cracking is severe the reservoir should be replaced,
5. The water in the wells seems to be of potable quality according to the Army maintenance personal via samples they have sent to the health department.
6. Currently there are no fire fighting systems on site. If fire hydrants were installed a flow of 1500 g.p.m. can only be maintained at the Camp Bonneville site for approximately 40 minutes and a fire flow of 1000 gpm can only be maintained for approximately one hour given the current system. If a greater fire flow is required then the reservoir system and or the pump/well capacity will need to be expanded. It is assumed that when the water piping system is replaced that a minimum pressure of 20 psi will be maintained at fire flows.

Fire flows of 1500 gpm can only be maintained at the Camp Killpack site for approximately 7 minutes and a fire flow of 1000 gpm can only be maintained for approximately 10 minutes. This flow duration is far too short to be of any practical use.

If the two systems were connected together a fire flow of 1500 gpm could be maintained for 45 minutes and a flow of 1000 gpm could be maintained for about one and a quarter hours.

Once the scenarios for reuse of Camp Bonneville are determined, an evaluation of how the current water system meets each of the scenarios needs can be undertaken.

One large unknown is if the Army ever got water rights to the wells on their property. Since the wells were sunk after the 30's they may not be grand fathered. This applies to all wells which withdraw over 5000 g.p.d.

Sanitary Sewer Systems

Site Inspection

Sanitary Sewer, Camp Killpack and Camp Bonneville

Visual observations, a review of existing construction documents and as-builts, and interviews with Army staff were combined to determine the capacity of the current sewage treatment facility as required by the scope of work. Recommendations on improvements necessary to support alternate site uses and the associated estimates of construction cost for proposed uses occur in the reuse planning phase of the work scope.

Existing conditions:

Currently both Camp Bonneville and Camp Killpack have a gravity sewer system to a pump lift station just southwest of Camp Bonneville. Also flowing into the lift station is a two inch force main. From the lift station the effluent is pumped via a 4 inch force main to two aeration ponds. The two unlined concrete ponds have an aerator each. The size of each pond is 215,000 cubic feet or about 1.6 million gallons. The total capacity of the two ponds is 430,000 cubic feet or 3.2 million gallons. The effluent discharge system is a surface application spray system in the woods to the east of the ponds. According to the Army maintenance personnel the on site disposal system has not been turned on in five years. There is currently little sewage inflow to the system due to the low occupancy of the camp facilities. There does seem to be a significant infiltration of ground water and storm water into the sewage system. The lift station is reported to run quite often during the day and running water can be heard in the sewer manholes leading to the lift station. The ponds also receive direct rainfall since they are uncovered and surface runoff from the hill to the north. Despite the inflow to the pond and the fact that the discharge system has not been used ponds have only been topped during the winter 100 year storm of 1996. This leads to the conclusion that the concrete ponds are cracked and discharging the effluent through the cracks.

The effluent discharge should not be dangerous or hazardous to the environment since there has been little sanitary load on the system. If the aeration ponds are to be used in the future they should be drained, checked for cracks, and sealed or lined. The current discharge system is not one that would be approved by the county health department for year round use. However, it could be allowed for a limited time during the dry months of the summer with further study.

There are currently no local or on-site bodies of water that could handle the quality of water that would come out of this pond aeration system. The effluent would need to undergo additional cleaning using mechanical systems or a batch reactor which produce higher quality output than a pond system can produce.

There remains the possibility of using a subsurface disposal system (drain field) in tandem with the current disposal system or to replace the spray discharge. The problem with a subsurface system may be the depth and quality of soil to accept the effluent. The soils are known to be very thin in the area of Camp Bonneville making it difficult to construct conventional drain field systems. Cap or sand mound systems may provide an alternative to conventional drain field systems depending on the ultimate load which future uses will impose and on the health department's current regulations and policies.

Other options include abandoning the ponds and going to small local treatment sites at each of the locations where sewage treatment is required. The option of local treatment will be better understood once the different future uses for the area are defined. These local systems would

need to have a sewage load of not more than 3500 gpd to meet the health department requirements. A load of 3500 gpd is equivalent to about 10 homes or 30 people per day.

Conclusion

This portion of the scope of work provides important baseline data from which future recommendations and cost estimates can be derived.

If the current pond system is to be used as part of the future development of the site, the sewer drains should be rebuilt to eliminate the groundwater infiltration. The existing ponds should also be drained and lined or the cracks sealed. The area around the ponds should be graded to eliminate the overland flow of surface water into the ponds. These actions should eliminate the added flow into the system and the leakage out of the system. When the ponds are drained they should also be cleaned of any sludge. In this scenario, the existing disposal system will also need to be evaluated with respect to the time of year requirements and the load on the system which future uses will impose.

If the current system is to be abandoned then the new system needs to be evaluated as to the size of each site and the daily load imposed by each use. The addition of any new systems will be confirmed and the associated costs determined during the reuse planning phase of the scope of work.

Roads

Site Inspection Roads

Visual observations and interviews with Army staff were combined to determine the condition of existing road systems at Camp Bonneville as required by the scope of work. The consultant was escorted on selected roads which the Army felt were safe to vehicle and/or foot traffic. A large number of roads were off limits due to safety concerns by the Army and therefore, the following comments, conclusions and recommendations are based on visual observations of but a small percentage of the roads on site. Recommendations on road modifications necessary to support alternate site uses and the associated estimates of construction cost for proposed uses will occur in the reuse planning phase of the work scope.

Existing Conditions, Observations, Preliminary Recommendations

Three types of roads were inspected:

1. Roads paved with asphaltic concrete.
2. Primary roads surfaced with crushed gravel.
3. Secondary roads surfaced with crushed gravel.

Roads paved with asphaltic concrete

Approximately 1.5 miles of road currently has an asphaltic concrete pavement wearing course over an unknown depth of crushed gravel. These roads are approximately 20 feet in width, graded to drain well and maintained in generally good condition. From visual observations and Army staff interviews it was concluded that these roads are able to carry two way traffic of normal cars and light trucks. Localized potholes were observed in two locations and do not

present a significant deterioration problem. Alligator cracking was observed along the wheel paths of these roads. Transverse cracking was less than 1/4" in width and is not considered excessive for a road of this time which has been subjected to heavy military vehicles. The reuse potential of these roads is high.

Primary roads surfaced with crushed gravel

These roads are approximately 12' in width and are in generally good condition. Gravel depth is estimated to be 12". These roads have traditionally carried heavy military vehicles and are, therefore, heavily compacted through use.

Maintenance of these roads had been good until recent time. Today, there is need for vegetation control to mitigate damage to the existing system. Most road areas are also in need of seasonal grading and graveling. The roads inspected had areas of localized erosion and culvert damage, the repair of which would not constitute a significant cost.

Reuse potential for these roads is good for controlled usage by vehicles or normal weight.

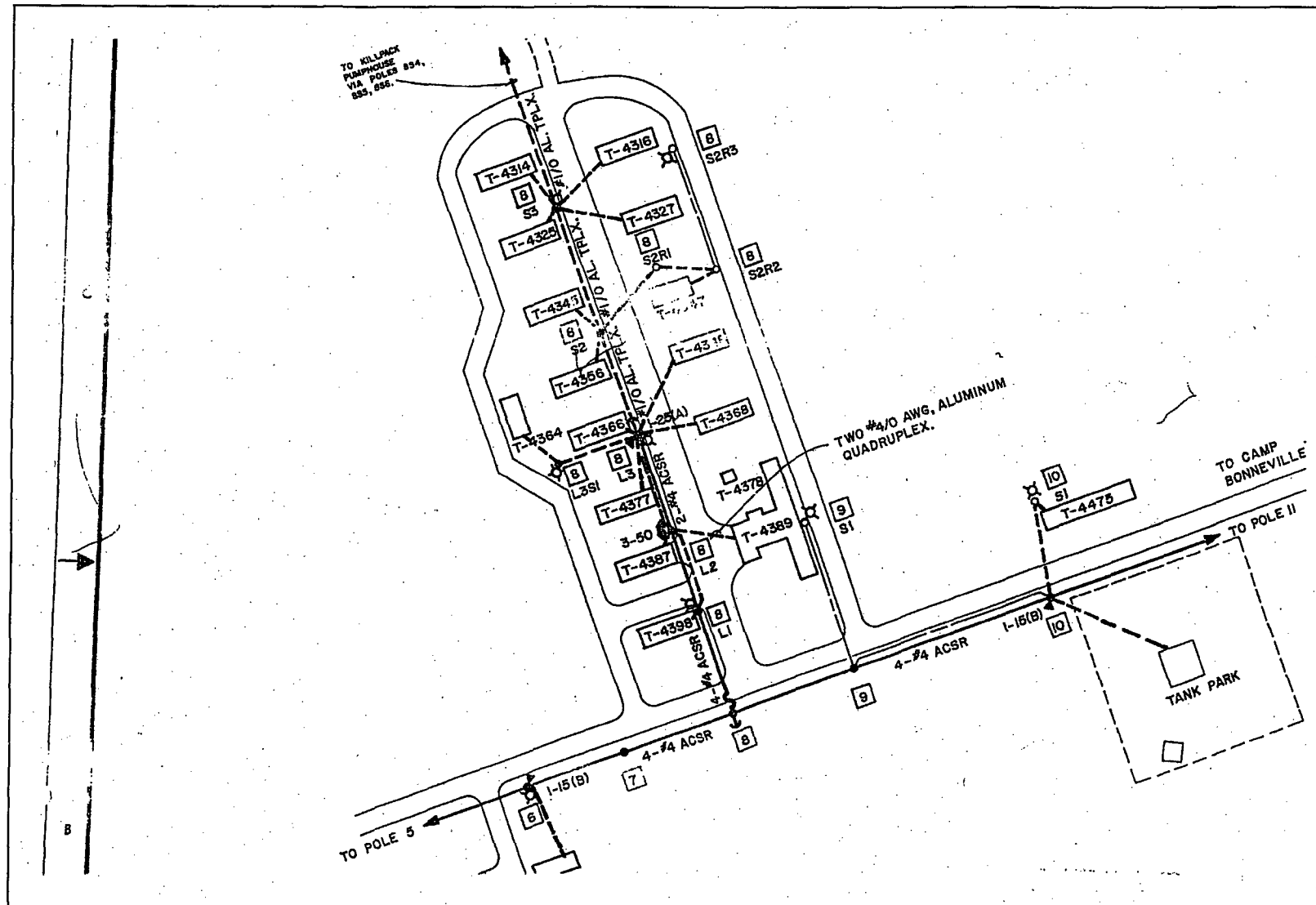
Secondary roads surfaced with crushed gravel

These roads have traditionally been used by all terrain military vehicles on an infrequent basis. Gravel depths range from 6" to 12" according to Army staff. While these roads have been well maintained by the Army over the years, they are currently in need of vegetation control and occasional repairs of culverts and areas of washout from heavy rains which have occurred over the past two years. With proper vegetation control and localized repairs, these roads can be reused for light wheeled vehicle usage or trail usage.

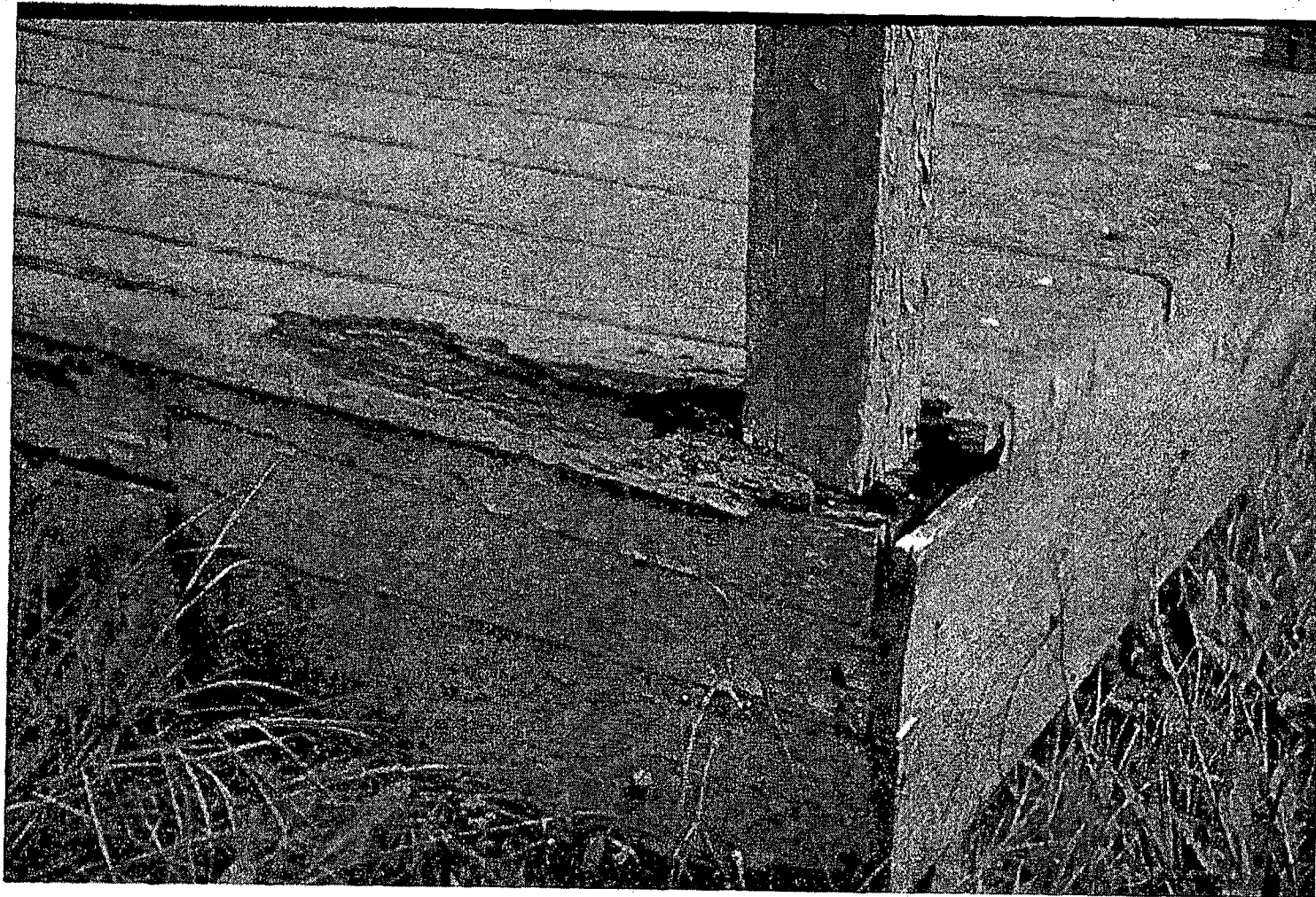
Other roads

Army maps show a series of roads and cart tracks throughout the Camp Bonneville site which were not physically inspected. While it is not possible to draw specific conclusions about their condition, if they have been maintained at the same level as those roads which were observed there should be good reuse potential for trails or light vehicle usage. Likewise, it should be assumed that vegetation control is also required.

Insert Road photos here

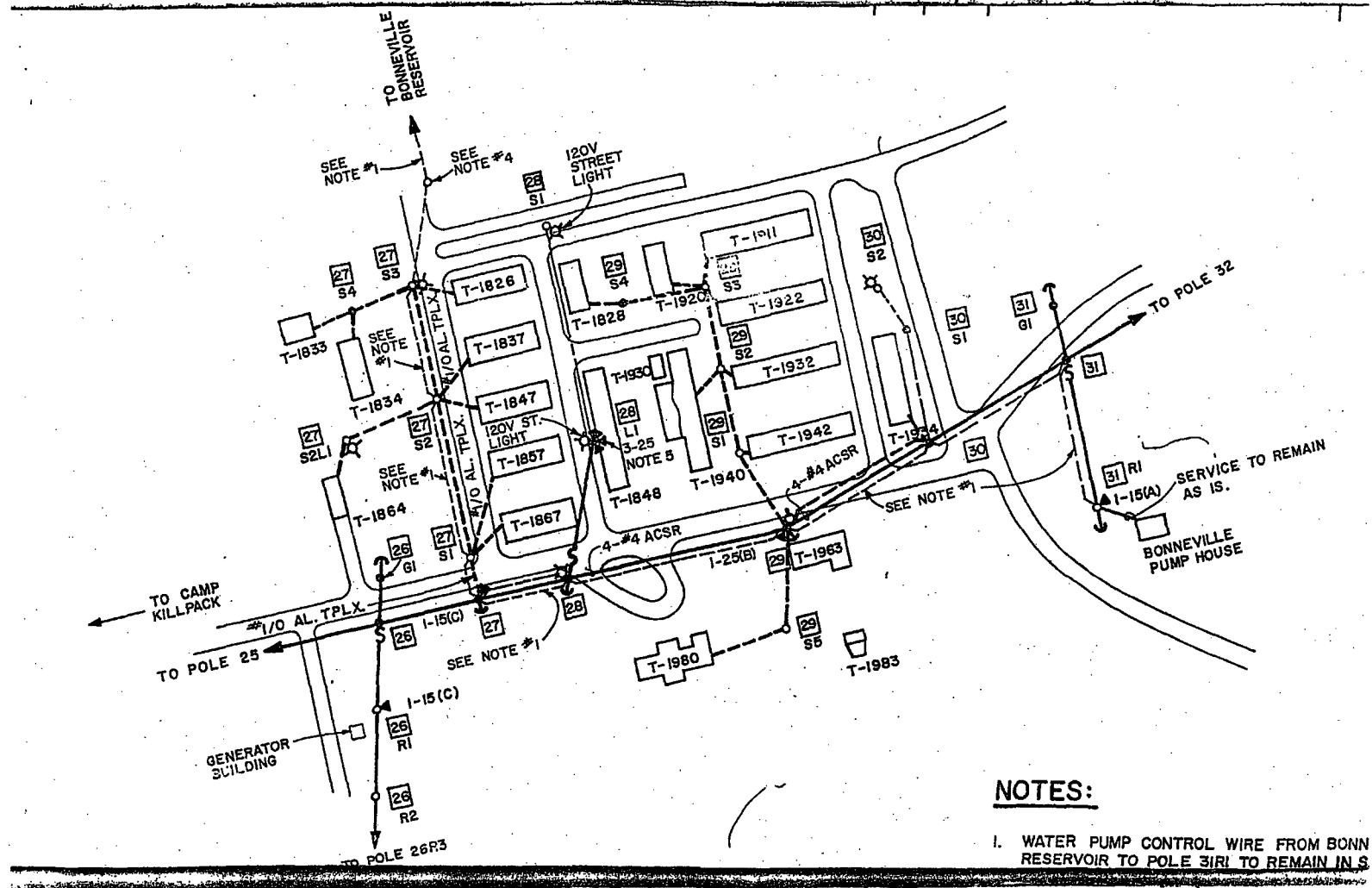


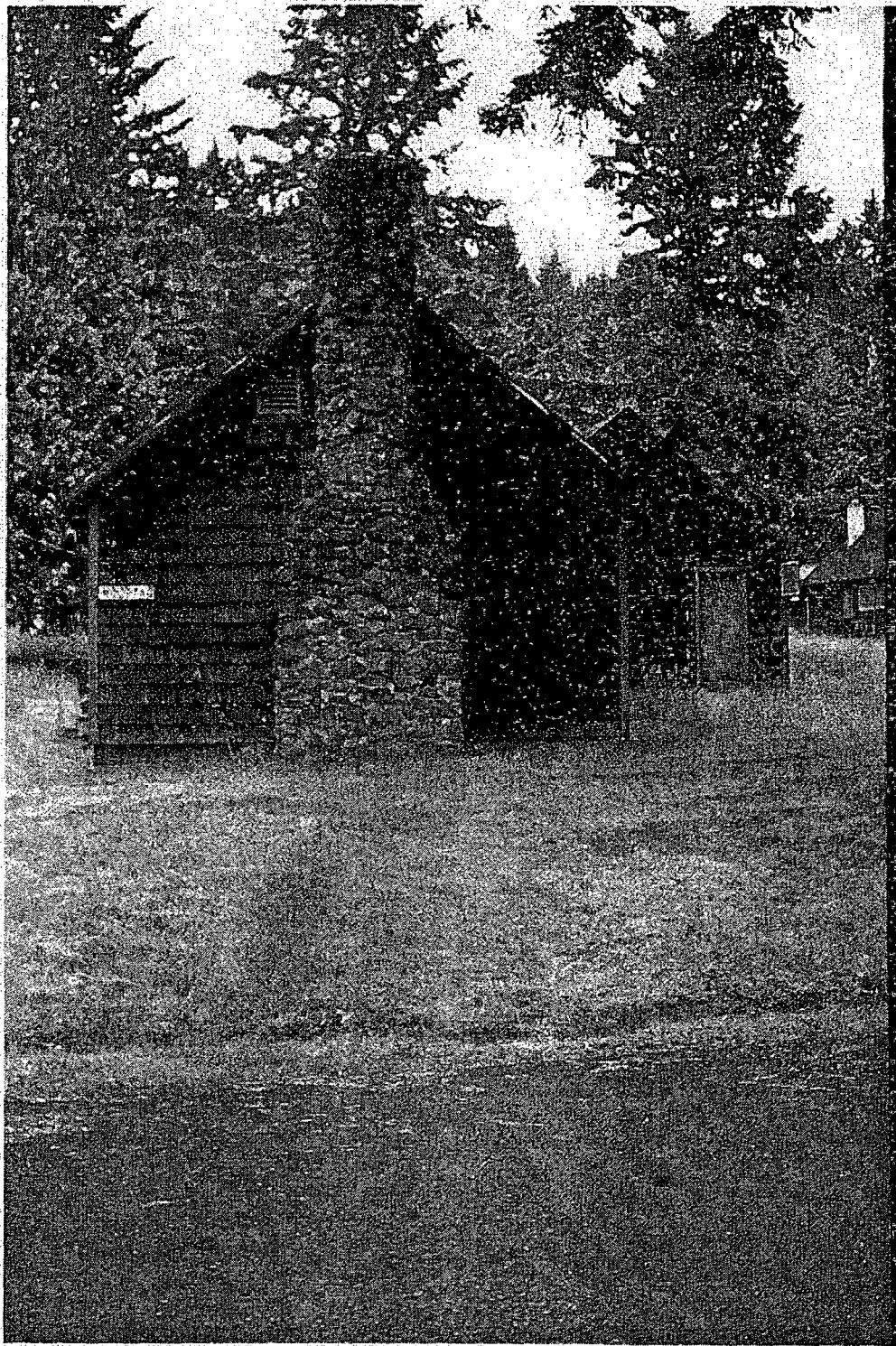
Camp Bonneville Reuse Plan, Appendix A, Killpack Cantonment

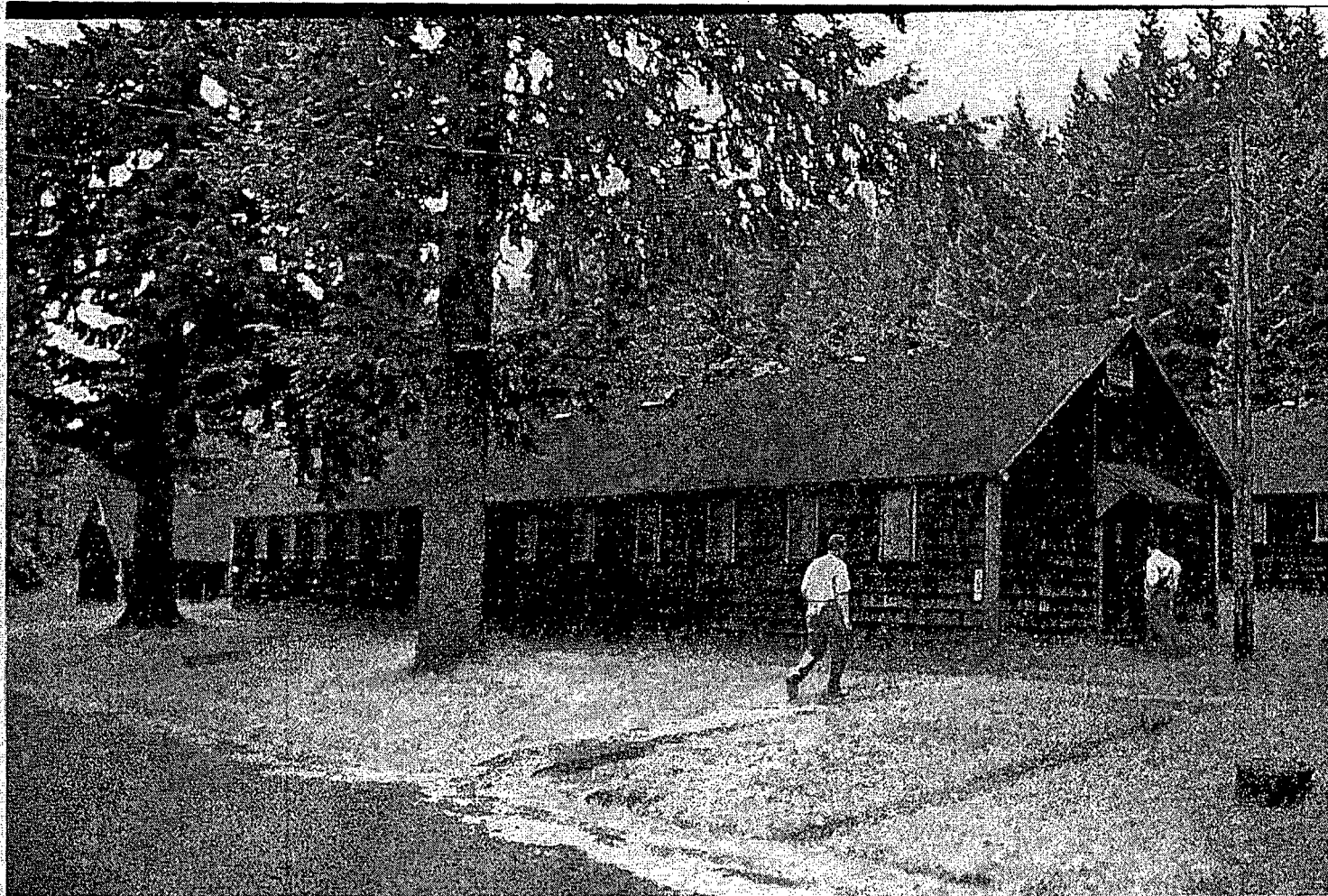


Camp Bonneville Reuse Plan, Appendix A, Killpack Cantonment

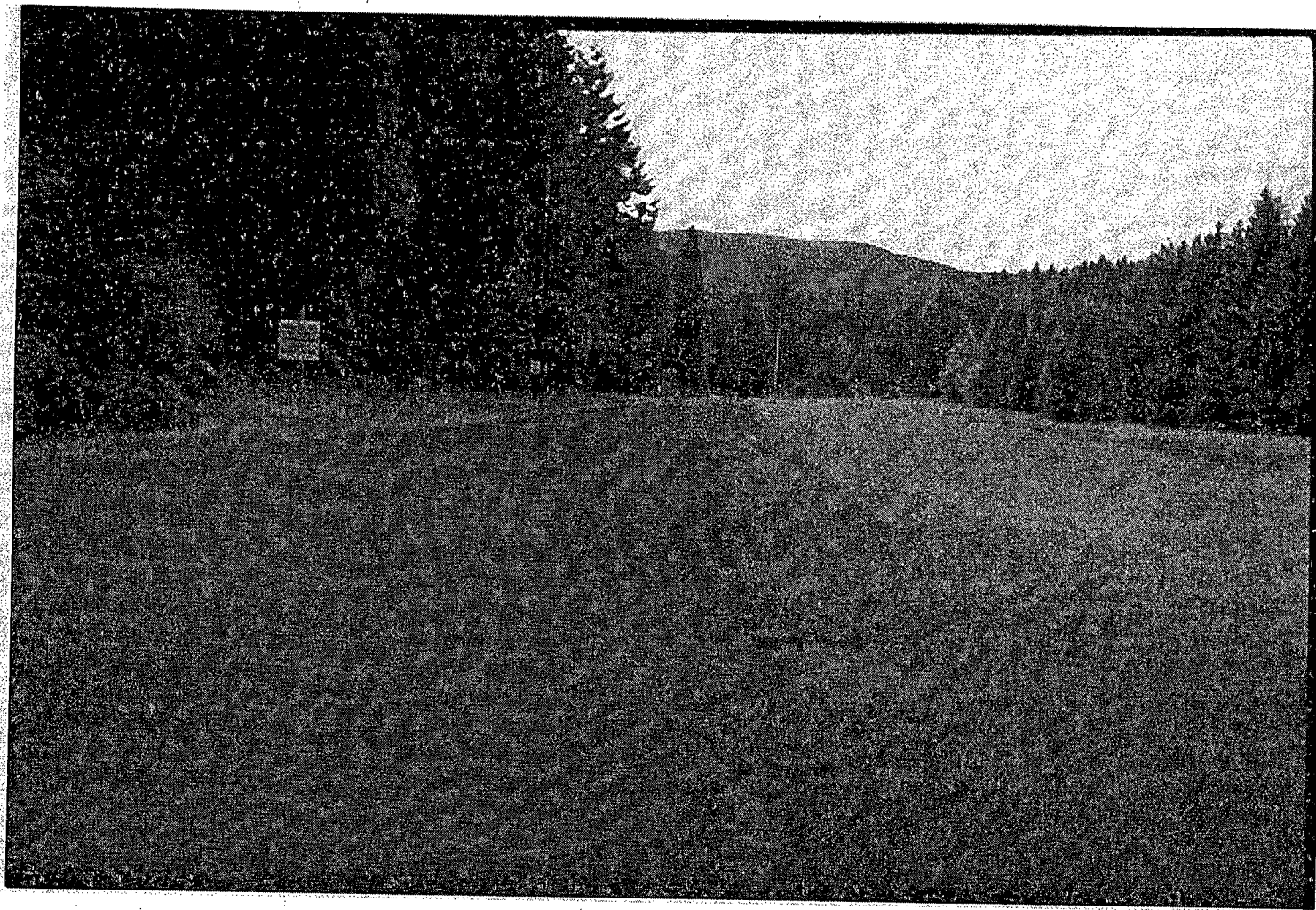
Infrastructure Report







Camp Bonneville Reuse Plan, Appendix A, Bonneville Cantonment



Camp Bonneville Reuse Plan, Annex A, Road Photo 1 of 3



Camp Bonneville Reuse Plan, Annex A, Road Photo 2 of 3



Appendix B

**CAMP BONNEVILLE
TIMBER INVENTORY ESTIMATE AND VALUATION
NOVEMBER 12,1997**

PORTIONS OF
TOWNSHIP 3 NORTH, RANGE 3 EAST, SECTIONS 34 & 35, AND
TOWNSHIP 2 NORTH, RANGE 3 EAST, SECTIONS 1, 2,3 & 10
CLARK COUNTY, WASHINGTON Prepared By

TONY PRANGER
FOREST RESOURCE MANAGEMENT, INC.

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TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

REPORT SUMMARY -- This report describes an informal inventory and value estimate of timber growing on approximately 2,617 acres of forest land located within the approximately 3,020 acre Camp Bonneville Military installation operated by the U.S. Army east of Vancouver in Clark County, Washington. The timber acreage estimation was determined from aerial photography interpretation.

The final report date for this valuation is November 12, 1997. The timber values presented here are an estimate only, which was based upon an informal walkthrough only. **This inventory is not based upon a formal timber cruise of the property and should not be considered as a replacement of such.** The values represented are Forest Resource Management, Inc.'s opinion of merchantable timber value only.

Only the Cost Approach was used for the merchantable timber valuation. There is a significant amount of timber on this property which has no commercial value due to restrictions under the Washington Forest Practices rules concerning streams and their protection. The values given in this report were determined by taking the volume, sort, and grade estimates of the merchantable timber within each delineated timber type, multiplying them by the estimated average log price for each timber type, and deducting the costs of logging (cutting, yarding, loading and hauling), sale layout and supervision, wildlife tree requirements, rock & road construction, and excise taxes. In the area delineated as Phase Two, a further adjustment of 5% of the gross value was deducted to account for possible lead and shrapnel which may be present in some of the trees. An adjustment of ten (10) percent was made for profit and risk.

The merchantable timber was valued assuming that all merchantable timber is clearcut harvested (as allowed by Washington Forest Practice Rules).

The indicated values are as follows:

PHASE ONE

Total Estimated Revenue	\$ 10,807,850
Total Estimated Costs	\$(3,638,062)
Profit & Risk (10%)	\$(716,979)
	<hr/>
	\$ 6,452,809
Net Estimated Merchantable Timber Value	\$ 6,450,000

PHASE TWO

Total Estimated Revenue	\$ 12,762,000
Total Estimated Costs	\$(5,956,397)
Profit & Risk (10%)	\$ (680,560)

Net Estimated Merchantable Timber Value

\$ 6,125,043

\$ 6,125,000

Total Net Estimated Merchantable Timber Value

\$ 12,575,000

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

GENERAL DESCRIPTION

Location and Access

This property is located east of Vancouver in Sections 34 & 35, Township 3 North, Range 3 East and Sections 1, 2, 3 & 10 Township 2 North, Range 3 East, W.M. of Clark County, Washington. The terrain on the property is highly variable, ranging from flat to very steep.

The primary access to the property is from the west on Pluss Road, a county maintained road. A significant portion of the timber on the property is accessible from existing gravel and dirt roads. Many of these roads, however, are in very poor condition and will require reconstruction. A small portion of the timber will require new road construction in order to be accessible to conventional logging systems.

It was assumed that all reconstructed and new roads will require rock since this value estimate occurs during the rainy season. The time required to remove a large amount of timber such as is located on Camp Bonneville would also necessitate the need to have rocked roads so that logging operations would not be halted due to the frequent wet weather which is expected in this area.

Productivity

Most of the subject timber is located on very moderate to steep slopes. The soil in the timbered areas generally consists of deep, moderate to well drained, clay loam type soils. The overall productivity of this parcel is slightly above average, and has an average site index of 117 (Low Site 2).

Several trees in the merchantable timber type were measured for total height and breast height age. These measurements were used to generate a site index based on King's 50 year site index table. These site trees represent an average site quality for the property. Site index is a measure of the relative productive capability of a forest area.

Timber Description

PHASE ONE

The merchantable timber in Phase One consists primarily of moderate to well stocked stands of Douglas-fir ranging in age from 40 to 80 years old. There are occasional hardwood species such as alder and maple scattered through these Douglas-fir stands. There is evidence of a significant amount of root rot present as well. The root rot occurs in scattered pockets throughout the area.

There is a lesser amount-of young, very overstocked stands of Douglas-fir. These stands

range from 20 to 35 years old. There is also a very small amount of timber which is primarily alder with scattered Douglas-fir.

The majority of the nontimbered areas of Camp Bonneville occur in Phase One. These areas encompass the living quarters, shooting ranges, fields, etc.

The total estimated merchantable volume in Phase One is 17,057 MBF (thousand board feet). It is estimated that Douglas-fir composes more than 90% of the volume. A significant portion (30% - 50%) of the Douglas-fir volume is of export quality. This volume occurs on approximately 874 timbered acres.

The majority of the merchantable timber in Phase One is located on flat to moderately sloped terrain that will allow tractor yarding. The steeper areas will require either cable or helicopter logging systems.

PHASE TWO

The merchantable timber in Phase Two is comprised of highly variable stands of Douglas-fir and hardwood species. Douglas-fir ranges in age from 20 to 80 years old. There are large areas of well stocked pure Douglas-fir stands as well as large areas of primarily poor quality maple and alder with scattered Douglas-fir.

The total estimated merchantable volume in Phase Two is 23,198 MBF (thousand board feet). It is estimated that Douglas-fir composes more than 65% of the volume. Approximately 15% to 30% of the Douglas-fir is of export quality. This volume occurs on approximately 1,743 timbered acres.

The majority of the merchantable timber in Phase Two is located on moderately sloped terrain that will allow tractor yarding. The steeper areas will require either cable or helicopter logging systems.

Timber Harvesting Restrictions

There are several streams on the property which require protection as required by Washington Forest Practices Rules. Lacamas, Buck, and David Creeks are the creeks which will require Riparian Management Zones (RMZ) be maintained during any timber harvesting. It is estimated that Buck and David Creeks will require a RMZ of 25 feet either side of stream. Lacamas Creek will require a RMZ of at least 50 feet either side of stream.

Some timber harvesting is allowed within the RMZ; however, for the purpose of this valuation the timber within this zone was not valued. Approximately 60 acres lie within RMZ areas on the property.

Depending upon the nature of the timber stand, 2 to 5 trees per acre are required to be left for each acre which is clearcut harvested. Clearcut areas cannot exceed 240 acres in size. Clearcut areas must have replanted trees which have achieved an average height of at least 4 feet before an adjacent area may be clearcut harvested if the combined area of the two units were to exceed 240 acres.

Approximately 5 years is required for planted seedlings to reach an average height of 4 feet if properly managed. For this reason, it would require at least 5 years to harvest all of the timber

on Camp Bonneville if that were the desired management objective.

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

INVENTORY SPECIFICATIONS

Sampling

Field work was completed in October and November of 1997. This included estimating property line locations, verification of timber types delineated on an aerial photo, measurement of site quality trees for age and height, and walking as much of the property as possible to estimate volume per acre and average log quality of each delineated timber type. The timber was estimated to the most current export and domestic sorts and grades.

The timber on this property was estimated by Tony Pranger, professional forester with Forest Resource Management, Inc., and Greg Taylor, president of Forest Resource Management, Inc. who have over thirty years of combined experience in timber inventory and appraisals.

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

FOREST TYPE SUMMARY

For the purpose of this inventory and valuation, 22 forest types were identified in the field with the aid of aerial photography. A forest type is an area which contains similar characteristics such as age, species composition, and quality throughout the type. A forest type may occur in several different areas and is not always a contiguous area. Types T1 through T10 occur in Phase One, types T11 through T22 occur in Phase Two. Non-timbered and RMZ areas occur in both Phase One and Phase Two.

PHASE ONE

FOREST TYPE #1: [Photo]

Type Description: This type consists of an overstocked stand of young Douglasfir approximately 20 to 25 years old. There is a small amount of scattered brush and alder as well. This type covers 175 acres.

Volume: There is approximately 4 MBF per acre for a total volume of 700 MBF of Douglas-fir.

FOREST TYPE #2: [Photo]

Type Description: This type consists primarily of 40 to 60 year old Douglas-fir. There is a high percentage of export quality timber in this type. There is a small amount of scattered alder and brush. This type contains many scattered root rot pockets. [Photo] This type covers 300 acres.

Volume: There is approximately 25 MBF per acre for a total volume of 7,500 MBF of Douglas-fir.

FOREST TYPE #3:

Type Description: This type contains a mix of alder, maple and 35 to 55 year old Douglas-fir. This type covers 74 acres. The North Fork of Lacamas Creek runs through this type.

Volume: There is approximately 16 MBF per acre for a total volume of 1,184 MBF.

FOREST TYPE #4: [Photo]

Type Description: This type contains primarily 50 to 60 year old Douglas-fir with a small amount of scattered maple and alder. There is a significant amount of export quality timber in this type. This type covers 91 acres.

Volume: There is approximately 23 MBF per acre for a total volume of 2,093 MBF.

FOREST TYPE #5: [Photo]

Type Description: This type contains a very overstocked stand of 40 year old Douglas-fir. This type covers 26 acres.

Volume: There is approximately 15 MBF per acre for a total volume of 390 MBF.

FOREST TYPE #6:

Type Description: This type contains a mix of primarily alder, maple and widely scattered 40 to

55 year old Douglas-fir. This type covers 30 acres.

Volume: There is approximately 8 MBF per acre for a total volume of 240 MBF.

FOREST TYPE #7:

Type Description: This type contains primarily well stocked stands of 40 to 80 year old Douglas-fir with scattered pockets of brush, alder and maple. This type covers 80 acres.

Volume: There is approximately 26 MBF per acre for a total volume of 2,080 MBF.

FOREST TYPE #8:

Type Description: This type contains a well stocked stand of 80 year old Douglas-fir. A high percentage of this type contains good quality export timber. This type covers 30 acres.

Volume: There is approximately 35 MBF per acre for a total volume of 1,050 MBF.

FOREST TYPE #9:

Type Description: This type contains a well stocked stand of 70 to 80 year old Douglas-fir. A high percentage of this type contains good quality export timber. This type covers 48 acres.

Volume: There is approximately 35 MBF per acre for a total volume of 1,680 MBF.

FOREST TYPE #10:

Type Description: This type contains brush and hardwoods with a few pockets of 50 year old Douglas-fir. This type covers 20 acres.

Volume: There is approximately 7 MBF per acre for a total volume of 140 MBF.

PHASE TWO

FOREST TYPE #11:

Type Description: This type contains a moderately well stocked stand of 70 to 80 year old Douglas-fir with scattered brush and hardwoods. A high percentage of the Douglas-fir is export quality. This type covers 107 acres.

Volume: There is approximately 30 MBF per acre for a total volume of 3,210 MBF.

FOREST TYPE #12: [Photo]

Type Description: This type contains a well stocked stand of 30 year old Douglas-fir. This type covers 31 acres.

Volume: There is approximately 6 MBF per acre for a total volume of 186 MBF.

FOREST TYPE #13: [Photo]

Type Description: This type contains primarily poor quality hardwoods and brush with widely scattered pockets of Douglas-fir. Buck Creek and David Creek run through this type. This type covers 410 acres.

Volume: There is approximately 4 MBF per acre for a total volume of 1,640 MBF.

FOREST TYPE #14:

Type Description: This type contains overstocked stands of 15 to 20 year old Douglas-fir with scattered brush and hardwoods. Buck Creek runs through this type. This type covers 322 acres.

Volume: There is approximately 8 MBF per acre for a total volume of 2,576 MBF.

FOREST TYPE #15:

Type Description: This type contains a well stocked stand of 60 to 70 year old Douglas-fir with

scattered brush and hardwoods. The East Fork of Lacamas Creek runs through this type. This type covers 143 acres.

Volume: There is approximately 30 MBF per acre for a total volume of 4,290 MBF.

FOREST TYPE #16:

Type Description: This type contains densely stocked non-merchantable alder which has overtopped suppressed Douglas-fir. This type appears to be an approximately 10 year old clearcut in which the reforestation has failed. This type covers 50 acres.

Volume: There is no merchantable volume in this type.

FOREST TYPE #17:

Type Description: This type contains a well stocked stand of 55 year old Douglas-fir. There is export quality timber in this type. This type covers 30 acres.

Volume: There is approximately 25 MBF per acre for a total volume of 750 MBF.

FOREST TYPE #18:

Type Description: This type contains a well stocked stand of 30 to 40 year old Douglas-fir. This type covers 28 acres.

Volume: There is approximately 14 MBF per acre for a total volume of 392 MBF.

FOREST TYPE #19:

Type Description: This type contains a well stocked stand of 30 to 40 year old Douglas-fir with scattered brush and hardwoods. This type covers 85 acres.

Volume: There is approximately 16 MBF per acre for a total volume of 1,360 MBF.

FOREST TYPE #20:

Type Description-. This type contains a very mixed stand of alder, maple, brush and Douglas-fir. This type covers 85 acres.

Volume: There is approximately 14 MBF per acre for a total volume of 1,190 MBF.

FOREST TYPE #21:

Type Description: This type contains stands of well stocked 40 to 70 year Douglas-fir which are separated by stands of alder, maple and brush. This type covers 396 acres.

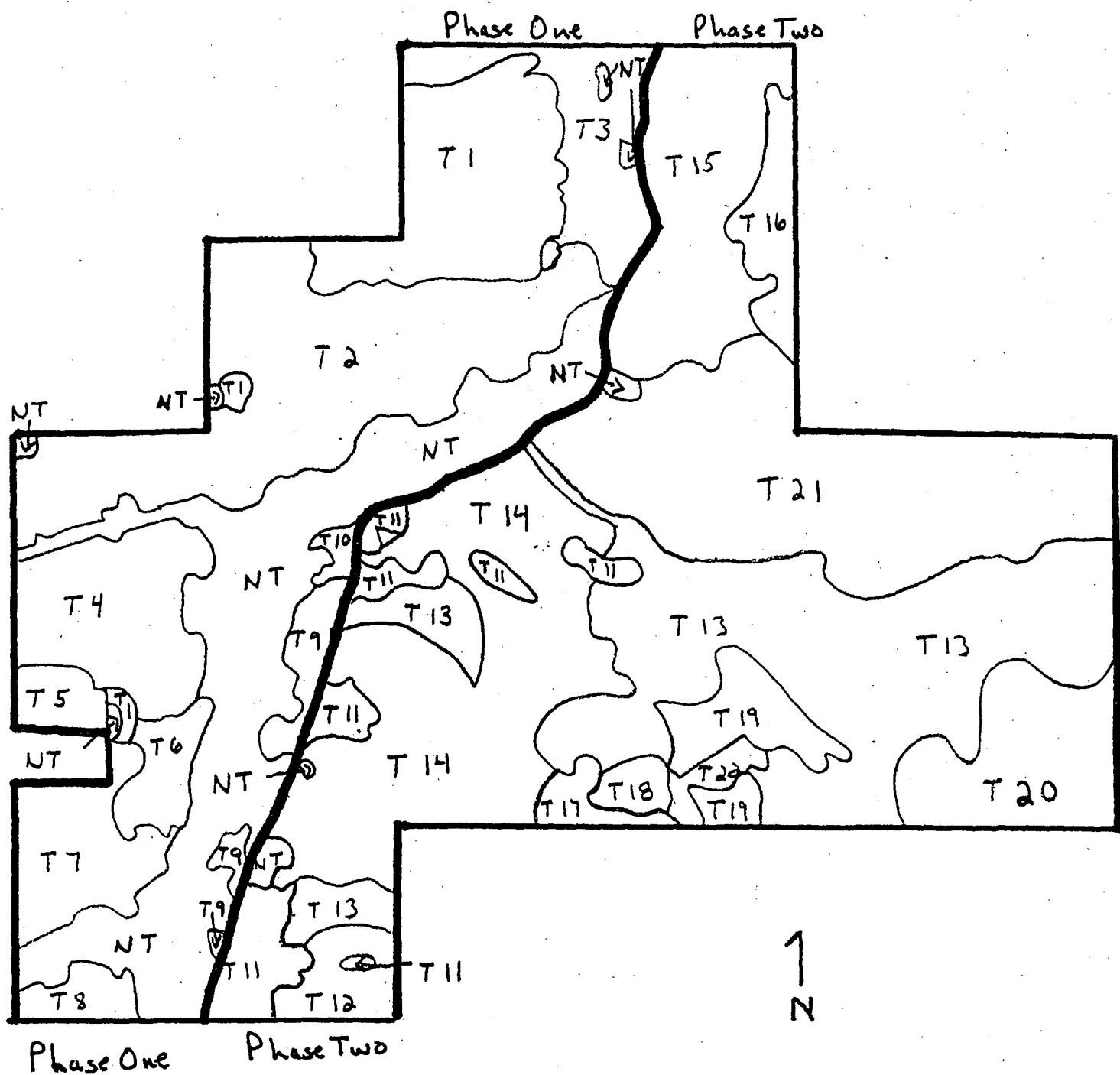
Volume: There is approximately 18 MBF per acre for a total volume of 7,128 MBF.

FOREST TYPE #22: [Photo]

Type Description: This type contains a series of beaver ponds and associated wet areas. There is no merchantable timber present. This type covers 22 acres.

Volume: There is no merchantable volume.

Timber Type Map



T1 = Timber Type 1

NT = Non Timber

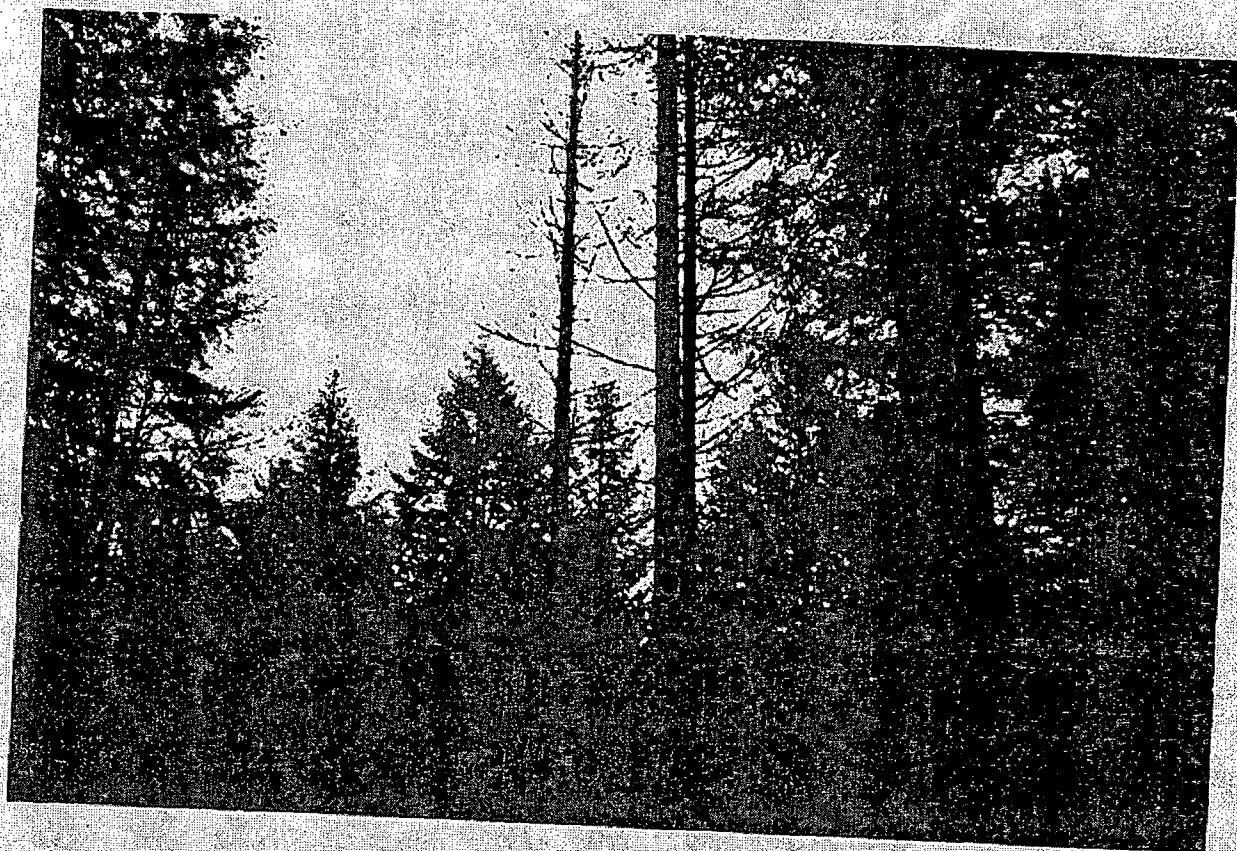
1" = 2000'



Forest type T1.



Forest type T2.



Dead Douglas-fir in root rot pocket.



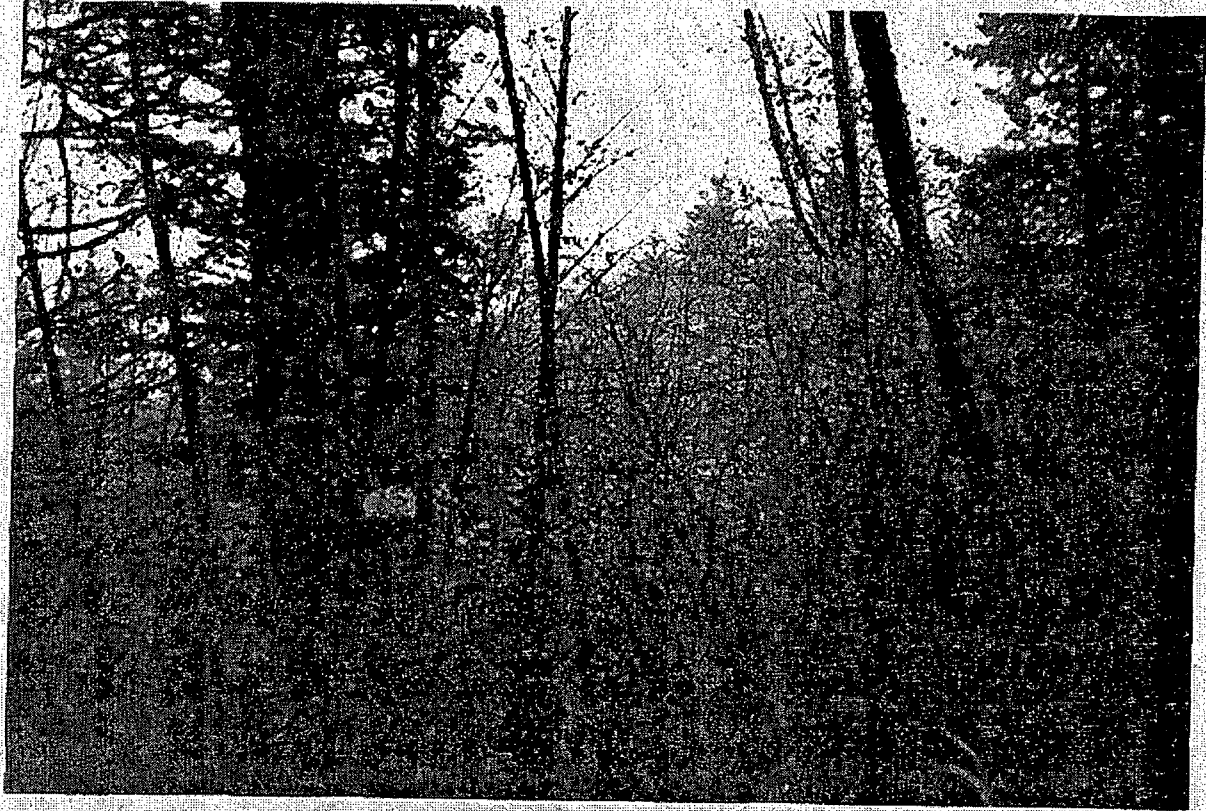
Forest type T4.



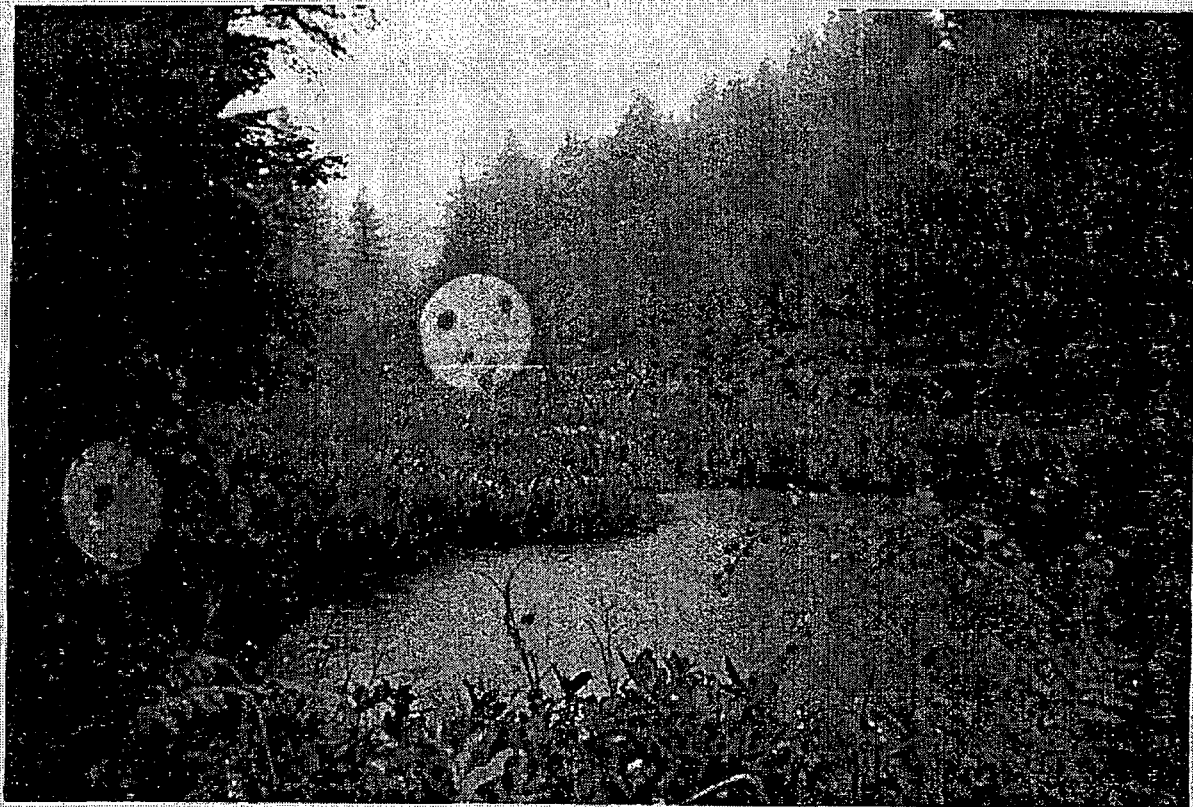
Forest type T5.



Forest type T12.



Scattered merchantable timber in T13.



Beaver ponds in T22.

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

TIMBER VALUATION

The valuation for this report is based on information obtained from an inspection and evaluation of the area, from local markets for forest products, and from the inventory included in this report. The value submitted is Forest Resource Management, Inc's. opinion of merchantable timber value.

The inventory of this property was completed in October and November of 1997. The values presented reflect the values as of the final report date of **November 12, 1997**. Only the Cost Approach was used for the merchantable timber valuation.

This valuation assumes that all merchantable timber is clearcut harvested as allowed by State of Washington Forest Practices Rules. There is significant volume that is unmerchantable, and therefore of no commercial value, due to harvesting restrictions as a result of Forest Practices rules. The merchantable timber value given in this report is the result of taking the volume, sort and grade estimates within each timber type, multiplying them by the estimated average log price for each timber type, and deducting the costs of logging (cutting, yarding, loading and hauling), sale layout and supervision, wildlife tree requirements, rock & road construction and excise taxes. In the area delineated as Phase Two a further adjustment of 5% of the gross value was deducted to account for possible lead and shrapnel which may be present in some of the trees. An adjustment of ten (10) percent was made for profit and risk.

It was assumed that during logging operations the owner and operator will comply with the Washington Forest Practices Rules. The estimated cost of logging and hauling are based upon the experience of Forest Resource Management, Inc. staff members who are involved in these activities on a daily basis. Estimates of the delivered value of the logs were made based upon the experience of Forest Resource Management, Inc. in selling logs to mills in the area that are currently buying logs of the type on this property. Based upon our experience in log marketing, these prices seem appropriate at this time.

The excise tax for this report was estimated by multiplying the 5 percent tax rate by the net revenue.

For the purpose of this valuation, it is assumed that all merchantable timber will be harvested without any restrictions due to threatened or endangered wildlife, fish, or plant species.

This valuation was prepared without bias or prejudice by Tony Pranger, professional forester. Mr. Pranger has extensive experience in the inventory and appraisal of forest land, supervising timber harvesting, marketing forest products, and developing and implementing forest resource management plans.

REVENUE PROJECTION - THINNING

As requested by the client, the following is an estimate of the potential revenue which may result from a large scale thinning of the property. It should be noted that thinning costs are consistently higher than clearcut harvest costs. This will slightly reduce the net return to the owner on a per unit basis.

It was assumed that the purpose of the thinning would be to achieve a more park like setting in the existing forest stands, many of which are currently quite thick. The thinning would also accomplish the removal of dead, dying or diseased trees, improve forest health and fire safety, as well as the removal of any hazard trees.

In Phase One it was estimated that 25% to 35% of the current volume would be removed. This would yield a net return of approximately \$1,600,000 to \$2,300,000. In Phase Two it was estimated that 10% to 20% of the current volume would be removed. This would yield a net return of approximately \$500,000 to \$1,100,000. **The total return from thinning both Phase One and Phase Two would be approximately \$2,100,000 to \$3,400,000.**

REVENUE PROJECTION - LONG TERM MANAGEMENT

As requested by the client, the potential annual revenue from managing the property for long term timber production was also considered. One possible scenario is managing the entire property for intensive timber management. It was assumed that 70 years would be a reasonable rotation length. This means that 1/70th of the acres are harvested and replanted each year.

Based upon a Site Index of 117 and assuming that the timber stands average 80% of normal basal area, the expected yield of each acre at age 70 is approximately 39 MBF of high quality Douglas-fir timber. Under a 70 year rotation approximately 37 acres would be harvested each year. This would result in an annual harvest of 1,443 MBF. **Based upon current prices, the expected annual net revenue under intensive timber management would be approximately \$700,000.**

It should be noted that this scenario would require clearcut harvests on an annual basis, and extensive clearcutting during the first ten year period of this type of management plan. There are numerous acres which are currently very unproductive which would require rehabilitation to establish well stocked Douglas-fir plantations. This type of scenario may or may not be an acceptable management alternative on all of the acres.

It is assumed that managing the entire property for intensive timber production is most likely not the preferred management alternative. Possible management goals such as limited clearcut harvest, thinning only, reserve areas, etc. will certainly reduce the potential annual revenue.

Another scenario considered was annual thinning on approximately 70 acres and clearcut harvest of 10 acres. This scenario would mean that each acre would be harvested approximately once every 260 years. This long term management scenario would reduce the annual production potential but could yield an annual revenue of approximately \$300,000.

As may already be apparent predicting the annual revenue is very difficult without the benefit of defined management goals. However, **it appears that it would not be very difficult to produce an annual revenue of \$200,000 to \$300,000 while operating on a small**

percentage of the property on an annual basis.

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

MANAGEMENT CONSIDERATIONS & POSSIBILITIES

The following are some general thoughts and comments which may be useful when considering the desired management objective for Camp Bonneville.

1. If timber harvesting is a desired objective a well written Forest Management Plan would be very beneficial to the managers of the property. A plan would state the goals of the property, describe the resource and any problems that exist, and would outline a plan of action to achieve various potential management goals such as forest health, fire safety, productivity, income, public safety, etc.
2. It should also be noted that current export prices are approximately 30% to 55% lower than they were one year ago. There is a significant amount of export timber already present, and under a well designed Forest Management Plan annual production of export quality timber would be very significant. There is no guarantee of future prices, but if future prices return to recent levels, annual revenues could increase up to approximately 25%.
3. There was an abundance of root rot pockets observed in several of the timber types located in Phase One. The rot, specifically Laminated Root Rot, kills Douglas-fir trees. Unless managed the root rot continues to spread. This presents several problems - dead trees are potential hazard trees to the public since they will certainly fall at some point, and potential timber production is reduced. The most effective management is to identify the infected areas, remove all the Douglas-fir trees and replant with a species which is resistant to the disease. Typically the infected areas are two acres or less which means that only small openings would be required to treat the infected areas.
4. Many of the existing roads on Camp Bonneville are currently in very poor condition. Revenue from timber harvest could certainly more than pay for the cost of reconstruction and maintenance of these roads, as well as paying for other various maintenance activities which may be needed.
5. If thinning the timber is one of the desired objectives for Camp Bonneville careful planning should be done before undertaking this project. Trees to be removed should be marked with the objective of removing dead, dying, diseased and hazard trees. If the thinning occurs in an area where future timber harvest is anticipated the thinning should attempt to improve the future quality of the residual timber. Designated skid trails should also be planned to minimize soil compaction and residual tree damage. The thinning should also have the objective of maintaining or improving the aesthetics of the site.
6. Many of the Douglas-fir stands are currently above optimum stocking levels. Stands in this condition have a greater risk of being destroyed by wildfire. If the Camp is to be used as a park this will certainly mean increased use by the public, especially during the summer months

when fire danger is the greatest. Thinning of these stands will greatly reduce the risk of catastrophic wildfire.

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

CERTIFICATIONS

The undersigned does hereby certify that, except as otherwise noted in this Timber Inventory Estimate and Valuation Report:

- 1) I have no present or contemplated future interest in the merchantable timber, that is the subject of this report.
- 2) I have no personal interest or bias with respect to the subject matter of this report.
- 3) To the best of my knowledge, the statements of facts contained in this report upon which the opinions and conclusions expressed herein are based, are true and correct.
- 4) No one other than the undersigned prepared the conclusions and opinions concerning values that are set forth in this report.

APPRAISER:

Tony Pranger
Forest Resource Management, Inc.

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

CAMP BONNEVILLE

ESTIMATED MERCHANTABLE TIMBER VALUATION

PHASE ONE

November 12, 1997

Revenue					
Type	Acres	Vol (MBF)	Price	Gross Value	Total Gross
		per Acre	per MBF	per Acre	Value
T1	175	4	\$425	\$1,700	\$297,500
T2	300	25	\$650	\$16,250	\$4,875,000
T3	74	16	\$575	\$9,200	\$680,800
T4	91	23	\$650	\$14,950	\$1,360,450
T5	26	15	\$550	\$8,250	\$214,500
T6	30	8	\$370	\$2,960	\$88,800
T7	80	26	\$660	\$17,160	\$1,372,800
T8	30	35	\$680	\$23,800	\$714,000
T9	48	35	\$675	\$23,625	\$1,134,000
T10	20	7	\$500	\$3,500	\$70,000
TOTAL REVENUE					\$10,807,850
COSTS	Logging & Hauling				
Type	Acres	Vol (MBF)		Cost per MBF	Total Cost
All	874	17,057		\$150	\$2,558,550
Wildlife Tree Requirements (1 %)					\$108,079
Rock & Road Construction					\$51,000
Sale Layout & Supervision (5%)					\$540,393

Excise Tax (5%)					\$380,041
					=====
TOTAL COSTS					\$3,638,062
Summary					
Total Estimated Revenue					\$10,807,850
Total Estimated Costs					\$3,638,062
Profit & Risk (10%)					\$716,979
					=====
					\$6,452,809
TOTAL NET ESTIMATED TIMBER VALUE					\$6,450,000

CAMP BONNEVILLE

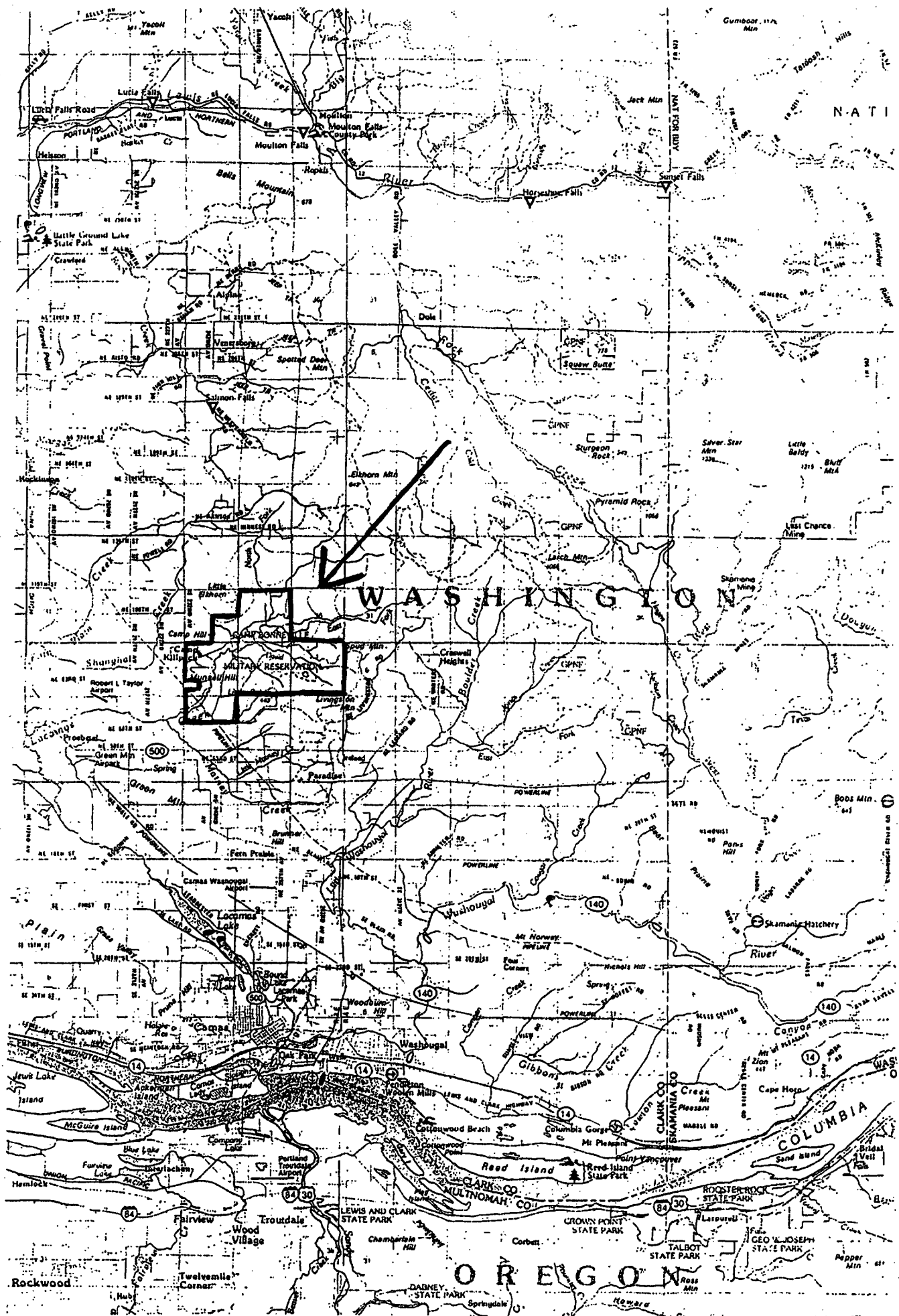
ESTIMATED MERCHANTABLE TIMBER VALUATION

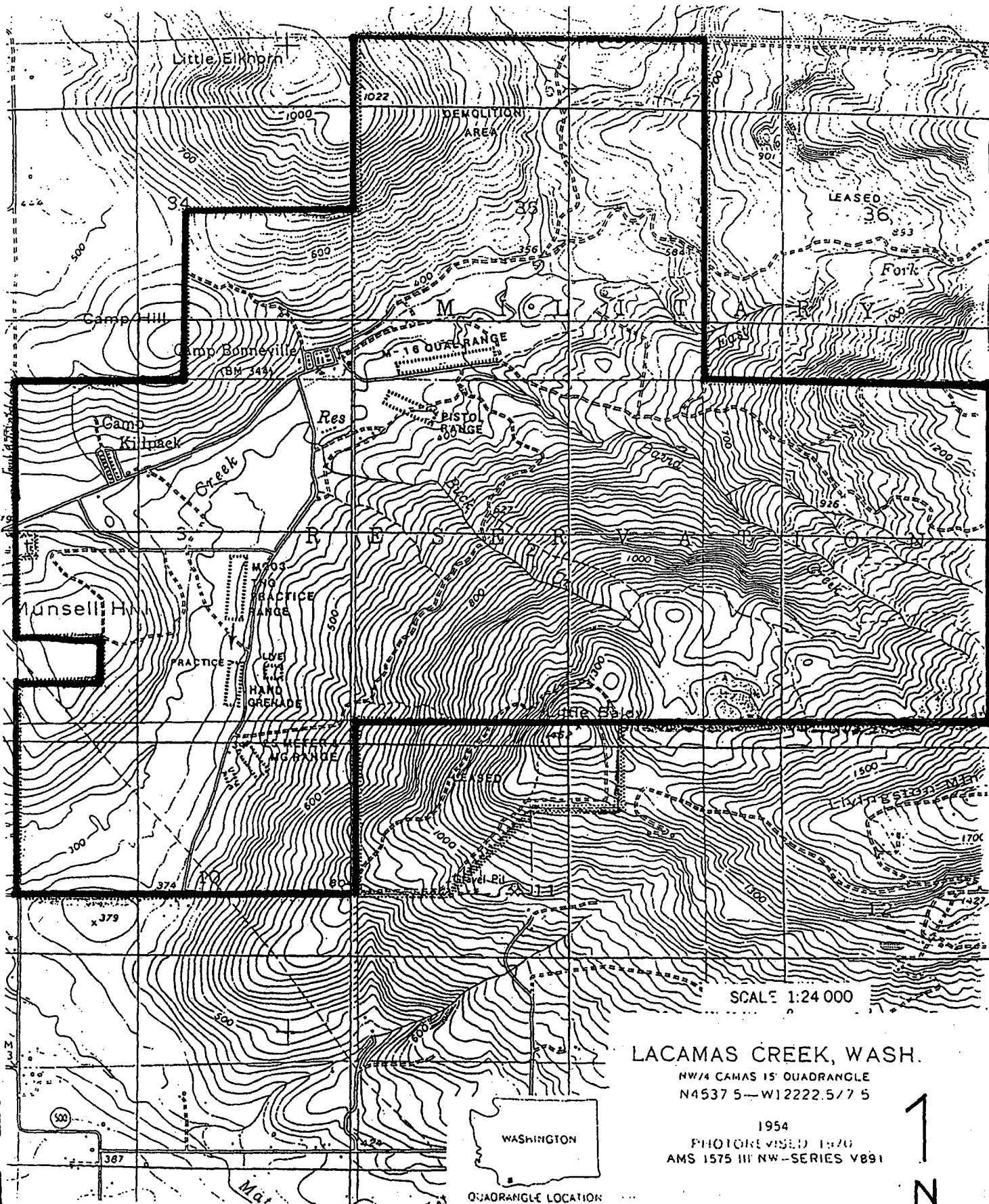
PHASE TWO

November 12, 1997

Revenue					
Type	Acres	Vol (MBF)	Price	Gross Value	Total Gross
		per Acre	per MBF	per Acre	Value
T11	107	30	\$650	\$19,500	\$2,086,500
T12	31	6	\$525	\$3,150	\$97,650
T13	410	4	\$350	\$1,400	\$574,000
T14	322	8	\$525	\$4,200	\$1,352,400
T15	143	30	\$650	\$19,500	\$2,788,500
T16	50	0	\$0	\$0	\$0
T17	30	25	\$625	\$15,625	\$468,750
T18	28	14	\$560	\$7,840	\$219,520
T19	85	16	\$565	\$9,040	\$768,400
T20	119	\$420	\$5,880	\$699,720	
T21	396	18	\$3,706,560		
T22	22	0	\$0	\$0	\$0
TOTAL REVENUE					\$12,762,000
COSTS					

Logging & Hauling					
Type	Acres	Vol (MBF)		Cost per MBF	Total Cost
All	1743	23,198		\$175	\$4,059,650
Lead & Shrapnel discount factor (5%)					\$638,100
Wildlife Tree Requirements (1 %)					\$127,620
Rock & Road Construction					\$128,000
Sale Layout & Supervision (5%)					\$638,100
Excise Tax (5%)					\$364,927
					=====
TOTAL COSTS					\$5,956,397
Summary					
Total Estimated Revenue					\$12,762,000
Total Estimated Costs					\$5,956,397
Profit & Risk (10%)					\$680,560
					=====
					\$6,125,043
TOTAL NET ESTIMATED TIMBER VALUE					\$6,125,000



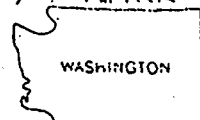


SCALE 1:24 000

LACAMAS CREEK, WASH.

NW/4 CAMAS 15' QUADRANGLE
N4537 5—W12222.5/7 5

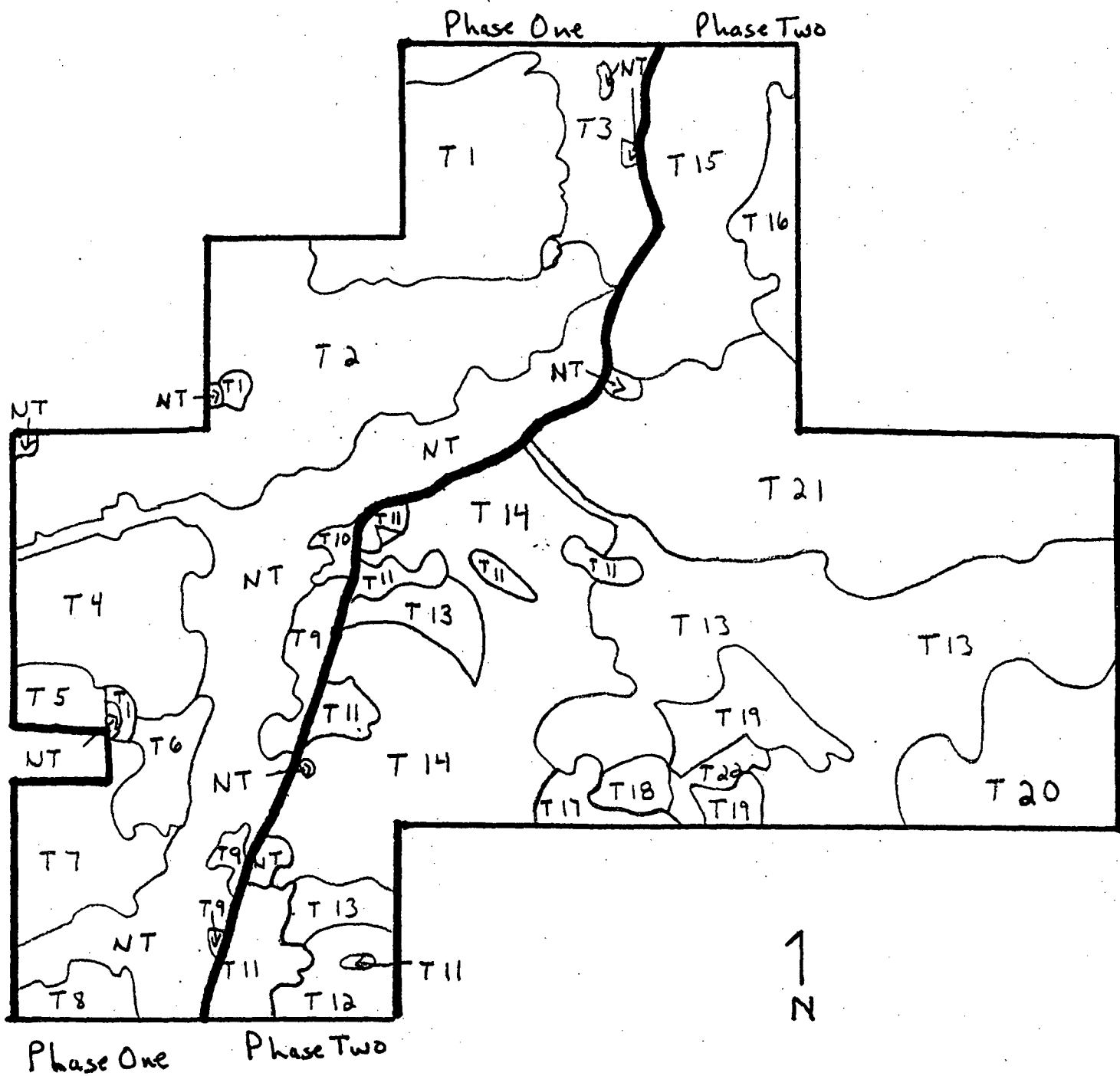
1954
PHOTO REVISED 1970
AMS 1575 III NW—SERIES V891



QUADRANGLE LOCATION

1
N

Timber Type Map



T1 = Timber Type 1

NT = Non Timber

1" = 2000'

TIMBER INVENTORY ESTIMATE AND VALUATION
FOREST RESOURCE MANAGEMENT, INC.
NOVEMBER 12, 1997

Underlying Assumptions and Limiting Conditions

1. No survey has been made by Forest Resource Management, Inc. to determine the exact location of property lines or to determine that the indicated property lines are correct. No responsibility is assumed for the accuracy of property lines, boundaries or legal descriptions and Forest Resource Management, Inc. is not liable for the accuracy of any property lines, boundaries or legal descriptions concerning the subject property, nor is it responsible or liable for any discrepancies or inaccuracies in the inventory report attributable thereto.
2. Certain opinions, estimates, data and statistics may have been furnished to Forest Resource Management, Inc. by others in the course of this project. Forest Resource Management, Inc. is not responsible for the accuracy of any such information and is not responsible or liable for any inaccuracies as a result of such information.
3. This inventory and appraisal report is intended to estimate the volume, species, grade, and value of timber on the subject property. This information is intended solely for the use of the client in the evaluation of these forest lands. The liability of Forest Resource Management, Inc., if any, shall be limited to the fees paid to Forest Resource Management, Inc.

Appendix C

Hobson Johnson & Associates	"Camp Bonneville Reuse Study"	(July 17, 1997)
E. D. Hovee & Company	"Camp Bonneville Market Verification"	(November 6, 1997)

DRAFT

DATE: July 17, 1997
TO: Mr. Doug Nichols
OTAK
FROM: Steve Ferrarini
HOBSON JOHNSON & ASSOCIATES
SUBJECT: Camp Bonneville Reuse Study

EXECUTIVE MEMORANDUM

Hobson Johnson & Associates has been retained to determine the expected level of usage and revenue generation potential of a conference/retreat center, campground, and an outdoor school at Camp Bonneville in Clark County, Washington. This memorandum and attached exhibits summarize our key findings and conclusions.

- A. Campgrounds
- B. Conference Center
- C. Outdoor School

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

B. CAMPGROUNDS

Conclusions regarding campgrounds are based on a survey of six campground and RV parks in the Portland/Vancouver area and operating statistics from the following sources:

1. Harrison Consulting Group. National Economic and Operations Survey of the RV Park and Campground Industry. RV Park & Campground Industry Education Foundation, 1993
2. Lykes, Ira. Recreational Vehicle Park Design and Management. Recreational Vehicle Industry Association. 1977.
3. Imler, John F. The RV Park Business: A Practical Approach to Buying, Building or Operating an RV Park, Resort, or Campground. Second Edition, 1994.

This information is summarized in EXHIBITS 3.01 - 3.02 and APPENDICES B.01 - B.06.

Expected Usage:

- Local campgrounds that have water, sewer, and electric power (full hook-ups) available at individual sites had 70% average annual occupancy rates, compared to 47% in campgrounds that do not have serviced sites. Combined, these local campgrounds average 62% occupancy, compared to 46% nationally.
- Assuming Camp Bonneville will not have utilities at individual campsites, the year round occupancy rate is expected to range from 35% to 50%. However, noise from firing ranges would lower campgrounds usage.

Fee Revenue Potential:

- Unimproved campgrounds charge between \$10 and \$11 per paved space per night, or \$5 per night for unpaved (tent) sites. Based on the mix of spaces in surveyed campgrounds (approximately 80% paved/20% unpaved) the weighted average rate is \$9.34. The weighted average cost in improved campgrounds was \$19.24 per space per night. This rate, however, is somewhat high because the Columbia Riverfront Park has views of the Columbia River, as well as Riverfront sites, and the Jantzen Beach RV Park has three pools and other amenities.
- Assuming Camp Bonneville will have unimproved campsites, it should be able to charge between \$8 and \$10 per night if 80% of its campsites are paved and 20% are unpaved. If improved spaces are developed, the nightly fees should range from \$13 to \$17.
- In addition to user fees, books on campground operations indicate that approximately 10% to 15% of total income comes from other sources, such as sale of incidentals (snack foods, souvenirs, and the like).

Operating Costs/Net Operating Income

- A campground at Camp Bonneville is expected to have net operating costs ranging from 40% to 50% of total income, based on national statistics. Thus after deducting operating expenses, a campground at Camp Bonneville should have net operating income equal to 50% to 60% of total revenue. Operating costs do not include the cost of debt service.

Market Depth

- The estimated market demand for campground spaces in Clark County is based on the existing supply of campsites, the amount of new spaces expected to enter the market, and the average vacancy rate reported for the unimproved campgrounds (47%). Demand is then increased based on population growth forecasted for Clark County and balanced against stabilized occupancy rates for campgrounds nationally (46%). Based on this methodology, the demand for campground space is summarized as follows:

	<u>1997</u>	<u>2002</u>
Est. Demand For Camp Sites	1,675	1,846
Est. Supply of Camp Sites	<u>1,600</u>	<u>1,700</u>
Unmet Demand	75	146

- The demand analysis shows there is currently excess demand for 75 spaces in 1997 increasing to 146 spaces in 2002.

Developing 25 to 100 campsites at Camp Bonneville would requires market penetration of 1.5% to 6.0% of total demand in 1997 to reach stabilized occupancy (46%). These penetration rates are achievable, assuming the campground is not negatively impacted by noise and unexploded ordinance.

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

Conference Center Exhibits

Exhibit 3.01 Summary of Selected Comparable R.V. Sites and Campgrounds

Exhibit 3.02 Projected Demand for Camping Sites Clark County

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

EXHIBIT 3.01
SUMMARY OF SELECTED COMPARABLE R.V. SITES AND CAMPGROUNDS
PORTLAND/VANCOUVER AREA
(July, 1997)

Project Name/ Location	Tents Allowed?	Total Spaces	Number of Sites 1			Serviced Sites	Percent Occupancy 2/			Rates		Dates of Service
			Paved	Unpaved	Pull-Thrus	Water, Sewer, Electric	On Season	Off Season	Year Round Wtd. Avg.	On Season	Off Season	
PUBLIC												
<u>R.V. PARKS/CAMPGROUNDS 3/</u>												
Battle Ground Lake State Park Battle Ground, Washington	Yes	50	35	15	17	0	80%	30%	43%	\$11.00 \$5 tents	\$10.00	Year Round 4/1 to 10/1 everyday 10/3 to 3/31 weekends
Paradise Point State Park Ridgefield, Washington	Yes	79	70	9	0	0	60%	10%	50%	\$10.00 \$5 tents	\$10.00 \$5 tents	
Public Subtotals/Weighted Averages:		129	105	24	17	0	68%	18%	47Z	\$9.34		
PRIVATE R.V. PARKS/CAMPGROUNDS 3/												
Columbia Riverfront RV Park Woodland, Washington	Yes	76	0	76	3	76	85%	50%	58%	\$20standard \$22 river	Same	Year Round
Jantzen Beach RV Park Portland, Oregon	No	169	169	0	9	169	90%	65%	75%	\$22.00 2 Persons	\$22.00 2 Persons	Year Round
Big Fir Campground Ridgefield, Washington	Yes	37	N/A	N/A	3	37	N/A	N/A	N/A	\$16.00	\$14.50	Year Round
99 Mobile Lodge RV Park Vancouver, Washington	No	64	N/A	N/A	4	64	N/A	N/A	N/A	\$12.91 2 Persons	\$12.91 2 Persons	Year Round
Private Subtotals/Weighted Averages:		346	169	76	19	346	88%	60%	70%	19.24		
Overall Totals/Weighted Averages		475	274	100	36	346	81%	46%	62%	\$16.71		
:Percentage of Total Spaces:					8%	73%						

1/ Total number of sites includes tent and RV spaces.

2/ Occupancy during the different seasons varies considerably and is dependent on factors such as weekends, holidays, weather, and the fishing season. These percentages reflect estimated averages only and are probably most accurate during busier weekend. "Peak Season" (On Season) is considered to be from May 1 to September 30, "Fishing Season" is the months of October and November (depending on the weather), and "Discovery Season" (Off Season) is from the beginning of December through the end of April.

3/ See appendices B.01 through B.06 for more specific information

SOURCES: Hobson Johnson & Associates, Woodall's Camping Guide, Camper's Guide to Oregon and Washington

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

EXHIBIT 3.02
PROJECTED DEMAND FOR CAMPING SITES
CLARK COUNTY

	1997	2002
Estimated Supply of Camping Spaces/Clark County 1/	1600	1700
x 365 Days Per Year	<u>365</u>	<u>365</u>
= Potential Visitor Nights/Clark County	584,000	620,500
x Average Annual Occupancy Rate 2/	<u>47%</u>	<u>47%</u>
= Estimated Demand for Camping Space Nights	274,480	274,480
+ Projected Growth in Camping/RV Visitor Nights 3/	<u>6,738</u>	<u>35,387</u>
= Total Projected Demand for R.V. Nights	281,218	309,867
÷ 365 Days per Year	<u>365</u>	<u>365</u>
= Average Daily Campground Demand/Clark County	770	849
÷ Assumed Structural Occupancy Rate 4/	<u>46.0%</u>	<u>46.0%</u>
= Supportable Campground Spaces/Clark County	1,675	1,846
Additional Supportable Spaces	75	146
Penetration Rates For Stabilized Occupancy		
Bonneville Campground - 25 Sites	1.5%	1.4%
Bonneville Campground - 50 Sites	3.0%	2.7%
Bonneville Campground - 75 Sites	4.5%	4.1%
Bonneville Campground - 100 Sites	6.0%	5.4%

1 / Based on an campground survey by Hobson Johnson & Associates. May include camp and RV sites.

2/ Based on a survey in the competitive market area (EXHIBIT 3.01). Applies occupancy rates for public (mostly unimproved) campgrounds.

3/ Assumes camping space demand grows at 2.5%, a rate equal to population growth in Clark County per METRO

4/ Based on the National Economic and Operations Survey of the RV Park and Campground Industry, 1993.

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

Camp Grounds Appendices -- Case Studies

Appendix B.01	<u>Battle Ground Lake State Park</u>
Appendix B.02	<u>Paradise Point State Park</u>
Appendix B.03	<u>Columbia Riverfront RV Park</u>
Appendix B.04	<u>Jantzen Beach RV Park</u>
Appendix B.05	<u>Big Fir Campground</u>
Appendix B.06	<u>99 Mobile Lodge RV Park</u>

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

**APPENDIX B.01
CAMPGROUNDS
CASE STUDY**

NAME OF FACILITY: BATTLE GROUND LAKE STATE PARK

CONTACT: State Campground
Jim Presser, Park Manager
360-687-4621

LOCATION: 18002 NE 249th
Battle Ground, Washington 98604
Junction Highway 503, 8 miles north, then 3 miles east

NUMBER OF SITES: 50 sites; 280 acres
* 35 standard paved sites (tents or RVs)
17 pull-thrus, the rest are back-in sites
* 15 primitive unpaved sites; must hike in (tents only)
• Group sites available for RVs
• No hook-ups

PERIODS OF USE/OCCUPANCY: Open year round

Occupancy Rate:
March, April, May, June: 30-40%
July through August: 95%
September through October: 50%
November through February: 10-25%

RECREATIONAL AMENITIES: Recreational activities include ten miles of hiking trails, designated swim beach (no lifeguard), lake swimming, boating, lake fishing, playground, horseshoes, dock, boat launch, one field, and scuba diving.
Recreation is open to the public for no fee during the day.
Disposal station and boat launch fee are both \$3.

FACILITIES: Facilities include two bathrooms with flush toilets, sinks, showers, handicap restroom facilities, sewage disposal, limited grocery store, ice, 48 picnic tables, water faucets every four campsites, and trailer dumps for self-contained RVs.

OVERNIGHT CAMPING FEES: \$11.00 for standard sites (one vehicle); \$10.00 during the off season
\$5.00 for each additional vehicle
\$5.00 for hike-in sites

COMMENTS: Reservations are recommended
Ten day stay limit May through September.

Also on the premises is a Group Camp. Facilities include private parking (20 cars), four buildings (sleeps 32 people total), running water, self contained pit toilets, and camp stoves. Cabins contain no electricity or heat. They rent for \$14 per building per night and for \$15 during the peak season.

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

APPENDIX B.02
CAMPGROUNDS
CASE STUDY

NAME OF FACILITY: PARADISE POINT STATE PARK

CONTACT: State Campground
360-263-2350

LOCATION: 33914 NW Paradise Park Rd.
Ridgefield, Washington 98642
Exit 14 off 1-5, 1 block east, 1 mile north

NUMBER OF SITES: 79 sites; 88 acres
* No hook-ups for RVs
* 70 standard paved sites
* 9 primitive walk-in sites

PERIODS OF USE/OCCUPANCY: Open 4/1 to 10/1, and on weekends only 10/3 to 3/31
Occupancy Rate:
Off Season (weekends October through March): 10%
On Season (everyday April through September): 55-60%
Weekends busy during July and August: 85-90%

RECREATIONAL AMENITIES: Recreational activities include swimming, boating, fishing, nature trails and picnicking. The park is located on the east fork of the Lewis River.

FACILITIES: Facilities include flush and pit toilets, dirt boat ramp (no usage fee), restrooms with showers, parking, 29 picnic sites, 27 braziers, sewage disposal (\$3 for non-campers), and public phones. There are two buildings with showers and restrooms (two showers per building). There is also a day use area with 50 parking spaces and 20 picnic tables that may be used free of charge.

OVERNIGHT CAMPING FEES: \$10 per night (includes 8 people per site and 2 vehicles)
\$5 for an additional vehicle
\$5 for primitive sites
No fee for parking or for day use

COMMENTS: Reservations may be made for April through September. Ten day stay limit June through September.

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

**APPENDIX B.03
CAMPGROUNDS
CASE STUDY**

NAME OF FACILITY: COLUMBIA RIVERFRONT RV PARK

CONTACT: Private Facility
800-945-9842

LOCATION: Woodland, Washington
Exit 22 off 1-5, 1 1/2 miles west on Dike Rd.

NUMBER OF SITES: 76 spaces

- Unpaved
- 3 Pull-Thrus
- All sites have full hook-ups* (30 and 50 amp receptacles)
- Group sites available for tenting
- Sites overlook the Columbia River; beach front sites available

* Sewer, Water, and Electric

PERIODS OF USE/OCCUPANCY: Open year round

Occupancy Rate:
On Season (Memorial Day-Labor Day): 80-90%
Off Season (September-May): 50%

RECREATIONAL AMENITIES: Located on the Columbia River
Beach, heated swimming pool, boating, canoeing, water skiing, river fishing, basketball hoops, playground, badminton, volleyball, and horseshoes.

FACILITIES: Air conditioning and heaters allowed, showers, handicap restroom facilities, laundry, public phones, cable TV and phone hook-ups, ice, picnic tables, fire rings, grills, LP gas refills.

OVERNIGHT CAMPING FEES: \$19.99 for standard sites
\$21.99 for river front sites

COMMENTS: Reservations are recommended April through November.

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

**APPENDIX B.04
CAMPGROUNDS
CASE STUDY**

NAME OF FACILITY: JANTZEN BEACH RV PARK

CONTACT: Private Facility
503-289-7626

LOCATION: 1503 N. Hayden Island Drive
Portland, Oregon
3.5 miles south on 1-5 from Columbia River, 1/2 mile west on Hayden Island Drive

NUMBER OF SITES: 169 spaces
* All sites are paved
* 9 pull-thrus; rest are back-in spaces
* All sites have full hook-ups* (20, 30, & 50 amp receptacles)
• Group sites available for RVs
• Some sites are seasonal
• No tents allowed

* Sewer, Water, and Electric

PERIODS OF USE/OCCUPANCY: Open year round

Occupancy Rate:
On Season (April through September): 90%
Off Season (October through March): 65%
Year round average occupancy is 75%

RECREATIONAL AMENITIES: Recreation hall, three heated swimming pools, wading pool, basketball hoop, playground. Pools are open Memorial Day to Labor Day.

FACILITIES: Laundry, showers, public phones, tables, and patios.

OVERNIGHT CAMPING FEES: \$22.00 for two people

COMMENTS: Reservations are recommended for June and August.
People come from all over: locally, Canada, other western states, Europe.
Most of the business is through referral or returning customers.

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

**APPENDIX B.05
CAMPGROUNDS
CASE STUDY**

NAME OF FACILITY: BIG FIR CAMPGROUND

CONTACT: Private Facility
Glen and Marie
360-887-8970

LOCATION: 5515 NE 259th St.
Ridgefield, Washington
Exit 14 off 1-5, four miles east

NUMBER OF SITES: 37 sites; 15 acres
* Separate area for tenting (10 sites)
* 3 pull-thrus
* All sites have full hook-ups* (20, 30, & 50 amp receptacles)

*Sewer, Water, and Electric

**PERIODS OF
USE/OCCUPANCY:** Open year round

Occupancy Rate:
N/A

**RECREATIONAL
AMENITIES:** Recreational activities include badminton, sports field,
horseshoes, fishing, volleyball, swimming, and croquet.

FACILITIES: Facilities include public phones, grocery store, ice, tables, grills,
hot showers, and flush toilets.

**OVERNIGHT CAMPING
FEES:** 1994 rates:
\$14.50 to \$16-00 for two persons

COMMENTS: Reservations are required.

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

**APPENDIX B.06
CAMPGROUNDS
CASE STUDY**

NAME OF FACILITY: 99 MOBILE LODGE RV PARK
CONTACT: Private Facility
L & Y Corporation; Craig and Connie
360-573-0351
LOCATION: 1913 Leichner Rd.
Vancouver, Washington 98686
Exit 7 off 1-5, 1 block east on 134th, 1/3 mile south on Hwy. 99
NUMBER OF SITES: 64 sites; 6.5 acres
* No tenting allowed
* Located in a mobile home park
* 4 pull-thrus
* All sites have full hook-ups* (20 and 30 amp receptacles)
*Sewer, Water, and Electric
PERIODS OF Open year round
USE/OCCUPANCY: Occupancy Rate:
N/A
RECREATIONAL
AMENITIES: Beauty shop and close to shopping.
FACILITIES: Sewage disposal, laundry, and public phones
One restroom and shower for each gender
OVERNIGHT CAMPING \$12.91 for two persons per night
FEES: \$2.00 extra for each additional person or pet
COMMENTS:

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

A. CONFERENCE CENTER

Our conclusions regarding conference centers are based on a survey of six conference centers, and statistics from a national survey of small non-profit conference centers published by the International Association of Conference Center Administrators in 1996.

This information is summarized in EXHIBITS 2.01 - 2.03 and APPENDICES A.01 A.07.

Expected Usage:

- "Person days" is the conference industry's standard method of determining a conference center's usage. A "person day" equals three meals and one night accommodation for overnight guests, or three meals for day users.
- The six surveyed conference centers averaged 89 person days of use per bed, 7.2% higher than the national average (83 person days per bed). Silver Falls Conference Center in Salem (116 person days/bed), and Camp Menucha (113 person days/bed) in Corbett, reported the highest level of usage. The lowest usage was 23 person days per bed at St. Mary's Conference Center, which has low rates because it is located in Toledo, Washington approximately 65 miles north of the Portland/Vancouver area.
- Based on these statistics, a conference center at Camp Bonneville is expected to attract from 83 person days per bed to 102 person days per bed. These assumptions equate to 6,600 person days to 8,200 person days annually, assuming a capacity of 80 beds.
- We expect that 50% to 70% of the centers total business will be overnight users. The high-end of the range is based on the average among the six surveyed projects. The low-end of the range is based on the three conference centers located closest to Camp Bonneville. These facilities derive 50% to 60% of their total business from overnight users.
- The forecast for Camp Bonneville assumes that new lodging and meeting rooms will be developed. The existing facilities are not adequate to support the forecasted level of usage.

Fee Revenue Potential:

The mix between day use and overnight use will significantly impact total income. As shown in the table below, overnight guest fees are nearly double day users fees. The table below excludes data from the Lacamas Conference Center, because it is not comparable to most other facilities in the survey.

Low

High

Average

Day Users	\$24.50	\$29.00	\$27.00
Overnight Users	\$39.76	\$55.33	\$47.85

- Based on comparable facilities, day user fees at Camp Bonneville are expected to range from \$23 per person to \$35 per person. Overnight fees are expected to range from \$42 per person to \$59 per person.
- Day fees include three meals and a fee for using the facility (if any). Overnight fees include three meals, a one night accommodation, use of conference and other facilities, and audio visual equipment.
- In addition to user fees, a conference center at Camp Bonneville can expect to have between 5% to 10% of total revenues generated from the sale of incidentals (snack, foods, souvenirs, and the like) or other fees (i.e. coin operated washer and dryer). These estimates are based on national statistics.

Operating Costs/Net Operating Income

- Operating costs at Camp Bonneville are expected to range from 85% to 95% of total revenue. The estimates are based on a survey of 45 conference centers in 20 states published by Laventhol and Horwath¹. Operating costs do not include debt service.
- After operating expenses, the Bonneville Conference Center is expected to have net operating income equal to 5% to 15% of total revenue.

Market Depth

- The estimated market demand for conference center beds is based on the existing supply of beds in the competitive market area (Portland/Vancouver Metropolitan Area), the number of new beds expected to enter the market, and the actual the person days per bed reported from comparable facilities (ranging from a low of 83 to a high of 102). Thus, it represents demonstrated demand in the current market. Demand is increased based on employment growth in the metropolitan area and then balanced against a stabilized usage level - 83 person days per bed - the national average. Based on this methodology, the demand for conference space is summarized as follows:

	1997		2002	
	Low	High	Low	High
Demand of Conference Beds	1,327	1,334	1,553	1,588
Supply of Conference Beds	<u>1,300</u>	<u>1,300</u>	<u>1,400</u>	<u>1,400</u>
Unmet Demand	27	34	153	188

- The demand analysis shows there is currently excess demand in the market.
- If the conference center at Camp Bonneville has 80 beds, it would need to penetrate only 6.0% of the market demand in 1997, dropping to approximately 5.0% in 2002. These penetration rates are achievable, indicating there is adequate demand to support a conference center at Camp Bonneville, assuming new facilities are built and the project is managed and marketed effectively.

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

Conference Center Exhibits

Exhibit 2.01 Price and Capacity Summary

Exhibit 2.02 Market Usage Summary

Exhibit 2.03 Projected Demand for Low-Cost Conference Space

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

EXHIBIT 2.01

PRICE AND CAPACITY SUMMARY
SELECTED AFFORDABLE CONFERENCE AND RETREAT CENTERS

Project/ Location	Estimated Overnight Capacity	Estimated Conference Capacity	Conference to Room Ratio	Overnight Accommodations				Day Rate Meals	Day Rate Other
				Types	Approx. Beds	%	Per Person Rate		
CAMP MENUCHA 38711 East Crown Point Highway Corbett, Oregon	160	237	1.48	Dorm Semi- Private Private	54 28 78 160	34% 18% 49% 100%	\$43.50 \$54.00 \$64.00 \$55.33	\$22.00	\$6.50
ST. MARY'S CONFERENCE CENTER 107 Spencer Road Toledo, Washington	170	367	2.16	Dorm Cluster Semi- Private Private	60 50 46 14 170	35% 29% 27% 8% 100%	\$38.00 \$38.00 \$43.00 \$43.00 \$39.76		
ALTON L. COLLINS RETREAT CENTER 32867 SE Highway 211 Eagle Creek, Oregon	66	307	4.65	Cluster Private 2/	40 26 66	61% 39% 100%	\$48.00 \$50.00 \$48.79	\$29.00	\$0.00
SILVER FALLS CONFERENCE CENTER 20022 Silver Falls Highway Sublimity, Oregon	78	240	3.08	Semi Private Semi Private	56 22 78	72% 28% 100%	\$48.50 \$45.00 \$47.51	\$22.50	\$2.00
LACAMAS CONFERENCE CENTER 2025 NE Goodwin Road Camas, Washington	117	350	2.99	Dorm	117	100%	\$22.50	\$11.25	N/A
OVERALL WEIGHTED AVERAGE	118	300	2.54				42.78	21.19	2.83
OVERALL WEIGHTED AVERAGE (excluding Lacamas)	119	288	2.43				47.85	24.50	2.83
1/ Based on rate for breakfast, lunch, and dinner. 2/ Assumes double occupancy.									
Dorm = 7+ beds per room Cluster = 4-6 beds per room Semi-Private = 1-3 beds per room & low room/bathroom ratio. Private = 1-2 beds & private bath.									

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

EXHIBIT 2.02

MARKET USAGE SUMMARY
SELECTED AFFORDABLE CONFERENCE AND RETREAT CENTERS

Project/ Location	Type	Overnight Business	Day Business	Annual Wtd. Avg. Occupancy	Estimated Person Days 1/	Estimated Person Days Per Bed	Local Market	% Business From Local Market	Typical Users
CAMP MENUCHA 38711 East Crown Point Highway Corbett, Oregon	Non-Profit	67%	33%	N/A	18,000	113	PDX/Van	N/A	33%-Other Non-profits
ST. MARY'S CONFERENCE CENTER 107 Spencer Road Toledo, Washington	Non-Profit	85%	15%	38%	3,912	23	PDX/Van	20%	50%-Church Groups 50%-Government & School District Groups
MARSHALL HOUSE 1301 Officer's Row Vancouver, Washington	N/A	0%	100%	N/A	N/A	N/A	PDX/Van	90%	Weekend business are weddings and parties Mid-week business are small meeting groups
ALTON L. COLLINS RETREAT CENTER 32867 SE Highway 211 Eagle Creek, Oregon	Non-Profit	50%	50%	44%	6,979	106	PDX/Van	60%	70%-Elder hostel and guests of other programs 15%-Government & School District Groups 15%-Other Non-profits
SILVER FALLS CONFERENCE CENTER 20022 Silver Falls Highway Sublimity, Oregon	For-Profit	98%	2%	48%	9,060	116	Salem PDX/Van	70%	30%-State & Federal Employees 20%-School District Groups 10-15%-Private Businesses 35-40%-Family reunions, religious groups, etc.
LACAMAS CONFERENCE CENTER 2025 NE Goodwin Road Camas, Washington	Non-Profit	60%	40%	36%	10,122	87	PDX/Van	98%	Most users are Christian groups. Others include school groups and boy scout troops
OVERALL WEIGHTED AVERAGE 3/		72%	28%	42%	9,615	89		68%	2.83
NATIONAL AVERAGE 4/						83			

1/ Equivalent to three meals plus an overnight for overnight guests, or three meals for day users

2/ Est. person days calculated on a ration of available beds to person days from national conference center survey (APPEN A.07), and adjusted for vacancy rates and observed regional differences

3/ Excludes data from the Marshall House calculation for day vs. overnight rates

4/ Per APPENDIX A.07

SOURCE: International Association of Conference Center Administrators and Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

EXHIBIT 2.03

**PROJECTED DEMAND FOR LOW COST CONFERENCE SPACE
 AND IMPLIED PENETRATION RATE FOR A CAMP BONNEVILLE
 CONFERENCE CENTER**

	1997		2002	
	Low	High	1997	2002
Est. Supply of Beds in Competitive Conference Space 1/	1300	1300	1400	1400
X Average Annual Person Days Per Bed 2/	<u>83</u>	<u>102</u>	<u>83</u>	<u>102</u>
= Potential Conference Center Demand - Person Days	107,900	133,055	116,200	142,800
+ Projected Growth in Conference Demand 3/	<u>2,266</u>	<u>2,794</u>	<u>12,724</u>	<u>15,637</u>
= Total Projected Annual Demand for Conference Rooms	110,166	110,694	128,924	131,837
+ National Average Annual Person Days 4/	<u>83</u>	<u>83</u>	<u>83</u>	<u>83</u>
= Supportable Nightly Conference Demand - Beds	1,327	1,334	1,553	1,588
Additional Supportable Beds	27	34	153	188
Camp Bonneville Development Assumption (No. Beds)	80	80	80	80
Penetration Rate for Stabilized Occupancy	6.0%	6.0%	5.2%	5.2%

1/ Based on an survey by Hobson Johnson & Associates in the competitive market area.

2/ Low based on national statistics (APPEN A.07); High based on an survey in the competitive market area (EXHIBIT 2.02)

3/ Assumes conference demand grows at an annual rate of 2.1 %, a rate equal to the forecasted employment growth in the metropolitan area

4/ Assumes market stabilizes at the national rate of persons per bed

SOURCE: METRO & Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

Conference Center Appendices -- Case Studies

Appendix A.01	<u>Camp Menucha</u>
Appendix A.02	<u>St. Mary's Conference Center</u>
Appendix A.03	<u>Marshall House</u>
Appendix A.04	<u>Alton L. Collins Retreat Center</u>
Appendix A.05	<u>Silver Falls State Park Conference Center</u>
Appendix A.06	<u>Lacamas Conference Center</u>
Appendix A.07	<u>National Occupancy Rates for IACCA Conference Centers (Less than 400 beds)</u>

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A.01
CAMP MENUCHA
CASE STUDY

NAME OF FACILITY:	CAMP MENUCHA		
CONTACT:	Merrit McCall, Director 695-2243		
ACRES:	100		
LOCATION:	Corbett, Oregon		
CAPACITY:	Total Capacity		160
	Total Beds Currently		174
	Beds Under Construction		36
TYPE OF GUEST ROOMS:	<u>Room Type</u>	<u>Approx. No. Beds</u>	<u>Percent Of Total</u>
	Dorm Rooms	54	34%
	Semi-Private Rooms	28	18%
	Private Rooms	78	49%
	Total/Wtd. Average	160	100%
RATE STRUCTURE:	<u>Room Type</u>		<u>Per Person Daily Room Rate 1/</u>
	Dorm Room*		\$43.50
	Semi-Private**		\$54.00
	Private**		\$64.00
	Wtd. Average		\$55.33
	1/ All room prices include three meals, conference space, and A/V equipment.		
	*If not brought by guests, bedding costs \$7.00, towels and washcloths cost \$1.25		
	**Bedding and towels included.		
	<u>Day Use</u>		
	Per Person Fee		\$6.50
CONFERENCE CENTER FACILITIES:	Meals (Breakfast, lunch, & dinner)		\$22.00
	Meeting Rooms		
	<u>Rooms</u>		<u>Seating Capacity</u>
	Wright Hall		125
	Ballard Hall		32
	Bowman House		10
	Beam House		20
	Boyd Hall		10
	Greenhouse Lounge		40
	Estimated Total		237
USERS:	Camp Menucha leases space to non-profit groups only.		
	The typical type of users are as follows:		
	33% - Church groups		
	33% - Government and education groups		
USAGE LEVEL:	33% - Other non-profit groups (i.e. self help, cultural groups, etc.)		
	The peak season runs from March to November, off-season is December - January.		
	Reservations are almost required one-to-two year in advance during the peak season.		
	In the off-season, the camp is used primarily on week-ends. Camp Menucha's Director, Mr. McCall, could not estimate seasonal occupancy.		
CONFERENCE/DAY USERS	Approximately 67% stay the night, 33% are day users.		
RECREATIONAL AMENITIES:	Outdoor pool, surfaced volleyball court, softball/soccer field, horseshoe pits, tennis court, and walking trails.		
SOURCE:	Hobson Johnson & Associates		

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A.02
ST. MARY'S CONFERENCE CENTER
CASE STUDY

NAME OF FACILITY:	ST. MARY'S CONFERENCE CENTER		
CONTACT:	Tom Sacks, Director. (360) 864-6464		
LOCATION:	Toledo, Washington		
ACRES:	11		
CAPACITY:	Total Estimated Capacity		200
	Total Beds		170
TYPE OF GUEST ROOMS:		Approx. <u>No. Beds</u>	Percent <u>Of Total</u>
	Room Type		
	Dorm Rooms	60	35%
	Cluster Rooms	50	29%
	Semi-Private Rooms	46	27%
	Private Rooms	14	8%
	Total	170	100%
RATE STRUCTURE:	<u>Room Type</u>		Per Person
	Dorm & Cluster Rooms		Daily Room Rates*
	Semi-Private		\$38.00
	Private		\$43.00
	Weighted Average		\$43.00
	*Rates include three meals per day, conference space and audio visual equipment.		\$39.76
CONFERENCE CENTER FACILITIES:	Meeting Rooms		
	<u>Rooms</u>		<u>Capacity</u>
	Seven Conference Rooms		15-100
	Eleven Classrooms		16
	Total Estimated Capacity		367
USERS:	St. Mary's is a non-profit conference center, and therefore must be used by other non-profits. The typical type of users are as follows:		
	50% - Church groups		
	50% Government and education groups		
MARKET:	20% - Portland /Vancouver metropolitan area		
	80% - Rest of Western Washington primarily Olympia, Tacoma, etc.		
USAGE LEVEL:	<u>Season</u>		<u>Occupancy</u>
	Peak Season (June-August)		60%
	Shoulder Season (Sept.-Nov. & Jan.-May)		35%
	Off Season (December)		0%
	Weighted Average		38%
OVER NIGHT VS. DAY USE	67% of the guests stay the night, 33% are day users.		
RECREATIONAL AMENITIES:	Full size gym with basketball & volleyball courts, and stage for skits, one mile from the Cowlitz River, 200 person chapel, and biking and walking trails.		
COMMENTS :	According to Mr. Sacks, customers like this conference center's peacefulness, cleanliness, and the staffs hospitality.		

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A.03
MARSHALL HOUSE
CASE STUDY

NAME OF FACILITY: MARSHALL HOUSE
CONTACT: OFFICER'S ROW
 (360)-693-3103
LOCATION: Vancouver, Washington
CAPACITY: Mid-Week Meeting Room Capacity
 Week-End Capacity
 * Includes the reception area that is not shown in the conference rooms below.

10-50 people
 225 people*

RECREATIONAL AMENITIES: None
TYPE OF GUEST ROOMS: None - conference only.

**CONFERENCE CENTER
 FACILITIES:**

	Max. Capacity	Rate 2 Hrs	Rate 7 Hrs
Meeting Rooms			
Rooms			
West Parlor	50	\$70-\$80	\$175-
Multi-Media Room	50	\$60-\$75	\$350
Bay Conf. Room	25	\$50-\$75	\$125-
East Parlor	40	N/A	\$30
	165		\$100-
			\$300
			\$225-
			\$300

Low end of range reflects mid-week day time prices, top of range are weekend prices.
 Discounts provided if more than one room is rented.
 Price includes use of catering kitchen
 Events must be catered which is not included in price
USERS: Most weekend business are private parties (i.e. weddings).
 Mid-week use are small groups.

MARKET: 90% - Portland /Vancouver metropolitan area (50% from Oregon/50% from Vancouver)

Season	Paid Users	Non-Paid
January	7	4
February	14	10
March	13	5
April	13	5
May	19	7
June	20	7
July	24	7
August	24	3
September	20	3
October	19	4
November	17	7
December	19	7
	209	76

1995 Total Event Revenue (not accounting for expenses): \$68,486
 1996 Total Event Revenue (not accounting for expenses): \$66,280

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A.04
ALTON L. COLLINS RETREAT CENTER
CASE STUDY

NAME OF FACILITY:	ALTON L. COLLINS RETREAT CENTER		
CONTACT:	Jannis Stevens 637-6411		
LOCATION:	Eagle Creek, Washington		
ACRES:	40		
CAPACITY:	Overnight Accommodations	66 beds	
	Conference Space	307 persons	
	Dining Capacity	200 persons	
TYPE OF GUEST ROOMS:		Percent	
	<u>Room Type*</u>	<u>No Beds</u>	<u>Of Total</u>
	Dorm Rooms	0	0%
	Cluster Rooms (4 beds/ room)	40	61%
	Semi-Private Rooms	0	0%
	Private Rooms (2 beds/room)	26	39%
	*All rooms have private baths.	66	100%
RATE STRUCTURE:		Per Person	
	<u>Overnight Use</u>	<u>Daily Room Rate</u>	
	Cluster (four/room)	\$48.00	
	Private (double occupancy)	\$50.00	
	Private (single occupancy)	\$59.00	
	Weighted Average (assuming double occupancy)	\$48.79	
	*Rates include all meals, linens & towels, conference space and audio visual equipment.		
)		
	<u>Day Use</u>	Cost	
	Meals (breakfast, lunch, & dinner	\$29.00	
CONFERENCE CENTER FACILITIES:	Meeting Rooms	Maximum	
	<u>Rooms</u>	<u>Capacity</u>	
	Auditorium	200	
	Library	25	
	Chapel	70	
	Conference Room	12	
	Total Estimated Capacity	307	
USERS:	As a non-profit conference center, most user groups must be non-profit organizations.		
	Typical user groups areas follows:		
	70% - Elder hostel and guests of other programs		
	15% - Non-profit groups		
	15% - Government and education groups (education is dropping).		
MARKET:	50-70% - From the Portland/ Vancouver metropolitan area		
	30-50% - From other areas		
USAGE LEVEL:	<u>Season</u>	<u>Occupancy</u>	
	Peak Season (May-Sept.)	70%	
	Shoulder Season (Sept.-Nov. & Feb.-April)	30%	
	Off Season (Dec.-January)	0%	
	Weighted Average	44%	
OVERNIGHT VS. DAY USE:	50% of the guests stay the night,		
	50% are day users.		
RECREATIONAL AMENITIES:	Hiking, volleyball, ping pong, and table games.		

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A.05
**SILVER FALLS STATE PARK CONFERENCE CENTER
 CASE STUDY**

NAME OF FACILITY:	SILVER FALLS STATE PARK CONFERENCE CENTER																		
CONTACT:	Dayna & Mike Rich (503) 873-8875																		
LOCATION:	Sublimity, Oregon																		
CAPACITY:	Overnight Accommodations	78 beds																	
	Conference Space	210 persons																	
TYPE OF GUEST ROOMS:	<table><tr><td><u>Room Type</u></td><td><u>Approx. No. Beds</u></td><td><u>Percent Of Total</u></td></tr><tr><td>Semi-Private (in Lodges)*</td><td>48</td><td>62%</td></tr><tr><td>Semi-Private (in Cabins)*</td><td>8</td><td>10%</td></tr><tr><td>Semi-Private ("Upper Smith" Cabins)**</td><td>22</td><td>28%</td></tr><tr><td>Total</td><td>78</td><td>100%</td></tr></table> <p>*most are double occupancy rooms. Each room has a half bath.</p>			<u>Room Type</u>	<u>Approx. No. Beds</u>	<u>Percent Of Total</u>	Semi-Private (in Lodges)*	48	62%	Semi-Private (in Cabins)*	8	10%	Semi-Private ("Upper Smith" Cabins)**	22	28%	Total	78	100%	
<u>Room Type</u>	<u>Approx. No. Beds</u>	<u>Percent Of Total</u>																	
Semi-Private (in Lodges)*	48	62%																	
Semi-Private (in Cabins)*	8	10%																	
Semi-Private ("Upper Smith" Cabins)**	22	28%																	
Total	78	100%																	
RATE STRUCTURE:	<table><tr><td><u>Overnight Use</u></td><td><u>Per Person Daily Room Rate*</u></td></tr><tr><td>Lodge and Cabins (Semi-Private)</td><td>\$48.50</td></tr><tr><td>"Upper Smith" Cabins (Semi-Private)</td><td>\$45.00</td></tr><tr><td>Weighted Average</td><td>\$47.51</td></tr></table> <p>*Rates include three meals per day, conference space, audio-visual equipment, and housekeeping service. **Pricing is set at the state's per diem.</p> <table><tr><td><u>Day Use</u></td><td><u>Cost</u></td></tr><tr><td>Meals*</td><td>\$22.50</td></tr><tr><td>Conference Space (Average)**</td><td>\$96.25</td></tr><tr><td>Est. Per Person Cost For Conference Day Rent (50 person avg.)</td><td>\$2.00</td></tr></table> <p>* Breakfast, lunch, & dinner ** Average for all rooms. the actual rate will depend on the capacity of the room rented.</p>			<u>Overnight Use</u>	<u>Per Person Daily Room Rate*</u>	Lodge and Cabins (Semi-Private)	\$48.50	"Upper Smith" Cabins (Semi-Private)	\$45.00	Weighted Average	\$47.51	<u>Day Use</u>	<u>Cost</u>	Meals*	\$22.50	Conference Space (Average)**	\$96.25	Est. Per Person Cost For Conference Day Rent (50 person avg.)	\$2.00
<u>Overnight Use</u>	<u>Per Person Daily Room Rate*</u>																		
Lodge and Cabins (Semi-Private)	\$48.50																		
"Upper Smith" Cabins (Semi-Private)	\$45.00																		
Weighted Average	\$47.51																		
<u>Day Use</u>	<u>Cost</u>																		
Meals*	\$22.50																		
Conference Space (Average)**	\$96.25																		
Est. Per Person Cost For Conference Day Rent (50 person avg.)	\$2.00																		
CONFERENCE CENTER FACILITIES:	<table><tr><td><u>Meeting Rooms</u></td><td><u>Maximum Capacity</u></td></tr><tr><td><u>Rooms</u></td><td></td></tr><tr><td>Smith Creek Hall</td><td>86</td></tr><tr><td>Smith Creek Dining Hall</td><td>76</td></tr><tr><td>Upper Smith Creek Hall</td><td>30</td></tr><tr><td>Lodge Units (four)</td><td>48</td></tr><tr><td>Total Estimated Capacity</td><td>240</td></tr></table> <p>*The reservations manager stated that this facility does not have enough meeting rooms.</p>			<u>Meeting Rooms</u>	<u>Maximum Capacity</u>	<u>Rooms</u>		Smith Creek Hall	86	Smith Creek Dining Hall	76	Upper Smith Creek Hall	30	Lodge Units (four)	48	Total Estimated Capacity	240		
<u>Meeting Rooms</u>	<u>Maximum Capacity</u>																		
<u>Rooms</u>																			
Smith Creek Hall	86																		
Smith Creek Dining Hall	76																		
Upper Smith Creek Hall	30																		
Lodge Units (four)	48																		
Total Estimated Capacity	240																		
USERS:	<p>*30% - State & Federal Employees *20% School Districts (used to be much higher) *10-15% - Private Businesses *35-40% - Family reunions, religious groups, etc.</p>																		
WHERE USERS ARE FROM:	<p>*20% - From Salem Metropolitan Area *50% - From the Portland Metropolitan Area 30% - Rest from Oregon or out of state</p>																		
USAGE LEVEL:	<table><tr><td><u>Season</u></td><td><u>Occupancy</u></td></tr><tr><td>Peak Season (June-Sept.)</td><td>70%</td></tr><tr><td>Shoulder Season (March-May & October)</td><td>45%</td></tr><tr><td>Rest of Year</td><td>30%</td></tr><tr><td>Weighted Average</td><td>48%</td></tr></table>			<u>Season</u>	<u>Occupancy</u>	Peak Season (June-Sept.)	70%	Shoulder Season (March-May & October)	45%	Rest of Year	30%	Weighted Average	48%						
<u>Season</u>	<u>Occupancy</u>																		
Peak Season (June-Sept.)	70%																		
Shoulder Season (March-May & October)	45%																		
Rest of Year	30%																		
Weighted Average	48%																		
OVER NIGHT VS. DAY USE	<p>98% of the guests stay the night, 2% are day users only (day use restricted).</p>																		
RECREATIONAL AMENITIES:	Heated outdoor pool, volleyball, ping pong, horseshoes, billiards, and hiking trails within the Silver Falls State Park.																		

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A. 06
LACAMAS CONFERENCE CENTER
CASE STUDY

NAME OF FACILITY:	LACAMAS CONFERENCE CENTER		
CONTACT:	Alan Pierce (360) 834-3262		
LOCATION:	Camas, Washington		
CAPACITY:	Overnight Accommodations		120 beds
	Conference Space		350 persons
	Dining Room		65 persons
RECREATIONAL AMENITIES:	Sport court (i.e. basketball, in-line hockey, etc.), baseball, horse shoes, walking trails, biking trails, and on Lacamas Creek.		
TYPE OF GUEST ROOMS:	Room Type	Approx. No. Beds	Percent Of Total
	13 Cabins (8-10 beds /cabin)*	117	100%
	*Bathrooms are located in separate buildings.		
RATE STRUCTURE:	Overnight Use		Per Person
	Less than 50 persons		Daily Room Rate
	More than 50 persons		\$23.00
	*Rates include three meals per day, and conference space.		\$22.00
	Day Use		
	Meals (breakfast, lunch, & dinner)		Cost \$12.50
CONFERENCE CENTER FACILITIES:	Meeting Rooms		Maximum
	Rooms		Capacity
	Auditorium		300
	Chapel		N/A
	Dining Room		12
	Lounge Area		N/A
	Total Estimated Capacity		350
USERS:	Most users are Christian groups, others are school groups, and boy scout troops.		
WHERE USERS ARE FROM:	98% - From the Portland /Vancouver metropolitan area		
	2% - From other areas		
USAGE LEVEL:	Season		Occupancy
	Peak Season (June-Aug.)		68%
	Off season (rest of year)		25%
	Weighted Average		36%
OVER NIGHT vs. DAY USE	60% of the guests stay the night, 40% are day users.		

SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
 July 17, 1997

APPENDIX A.07
NATIONAL OCCUPANCY RATES FOR IACCA
CONFERENCE CENTERS (LESS THAN 400 BEDS)

Center	Number Beds	Person Days	Person Days Per Bed	Occupancy Rate
1	170	3912	23.0	6%
2	196	5250	26.8	8%
3	120	5725	47.7	14%
4	200	7567	37.8	11%
5	250	12000	48.0	13%
6	287	13500	47.0	13%
7	358	14525	40.6	11%
8	43	4,580	106.5	30%
9	63	9,688	153.8	42%
10	72	6,289	87.3	24%
11	75	6,451	86.0	24%
12	78	5,250	67.3	18%
13	82	11,240	137.1	38%
14	92	12,137	131.9	36%
15	120	8,973	74.8	20%
16	120	18,623	155.2	56%
17	150	11,780	78.5	28%
18	152	11,600	76.3	30%
19	165	22,000	133.3	32%
20	170	14,203	83.5	24%
21	174	15,799	90.8	25%
22	175	16,061	91.8	25%
23	200	22,893	114.5	32%
24	201	23,163	115.2	32%
25	206	26,660	129.4	35%
26	208	12,776	61.4	18%
27	213	13,578	63.7	17%
28	213	19,876	93.3	26%
29	225	35,830	159.2	44%
30	233	16,848	72.3	20%
31	246	24,992	101.6	29%
32	250	12,000	48.0	33%
33	266	16,520	62.1	27%
34	300	34,398	114.7	33%
35	360	31,200	86.7	24%
36	<u>396</u>	<u>41,453</u>	<u>104.7</u>	<u>44%</u>
AVERAGE	190	15,815	83.4	26%

SOURCE: International Association of Conference Center Administrators (IACCA)
 and Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

C. OUTDOOR SCHOOL

Conclusions regarding outdoor schools are based on a survey of six outdoor schools: three in Washington and three in Oregon. This information is summarized in EXHIBIT 4.01 and APPENDICES C.01 - C.05. Unfortunately, several of the people interviewed were either unwilling or unable to provide information on operating costs and facility usage, thus some estimates could not be made.

Expected Usage:

- The amount of usage reported by individual camps varied considerably. The camps most competitive with the subject property in terms of location and service to local school districts are Camp Wa-Ri-Ki and Camp Melacoma. These camps operate for approximately 8 to 10 months a year. They are nearly 100% utilized during July and August, but during the rest of the year they are used mostly on weekends. On weekdays they are used for outdoor school, however the amount of usage varies depending on the size of the school district. Based on these reported usage levels, it appears that Camp Wa-Ri-Ki and Camp Melacoma operate at approximately 55% to 65% of capacity during the months they are opened. This equated to approximately 12,000 to 17,000 visitors annually.
- We would expect an outdoor school at Camp Bonneville to have usage levels most similar to Camp Wa-Ri-Ki and Melacoma, thus ranging from 12,000 to 17,000 person visits annually. This forecast assumes there is adequate demand.
- The existing facilities should adequately serve the needs of youth camps, with the possible exception of the kitchen/eating area that is reportedly in need of repair. No other significant upgrades are needed.

Fee Revenue Potential:

Camp Bonneville should be able to charge from \$5 to \$8 per person. This is similar to fees charged by Camp Wa-Ri-Ki and Camp Melacoma. The fee covers the cost of using the facility, it does not include meals. School districts may be given a discount.

Operating Costs/Net Operating Income

- According to Mary Beaddor, director of Camp Melacoma, operating costs usually exceed total revenues in outdoor schools. On this basis we would expect an outdoor school at Camp Bonneville to lose money.

Market Depth

- There was not adequate information to conduct a market depth analysis. Those interviewed did not provide detailed enough information on the groups that used their facilities, nor do we have national statistics on similar facilities to compare to the operation of local facilities. Indications regarding the balance between supply and demand are mixed. On the one hand the current market for youth camps and outdoor schools appears to be competitive. For example, Vancouver School District schools already attends outdoor school camps facilitated by OMSI at Camp Namanu in Sandy, Oregon; Washougal School District goes to Black Lake in Tacoma; Evergreen School District attends Camp Wa-Ri-Ki; and the Cispus Learning Center attracts usage from around the state. On the other hand, Mr. Gary Wallace, of the Evergreen School District, stated that there is demand for more outdoor school facilities in Vancouver.

EXHIBIT 4.01
SUMMARY OF SELECTED OUTDOOR SCHOOL
WASHINGTON AND OREG

(July, 1997)

Project Name/Location	Size (Acres)	Maximum Overnight Capacity	User Groups/Camp Activities	Facilities
<u>WASHINGTON</u>				
Camp Wa-Ri-Ki Washougal, Washington	25	125	Kawanis Club Evergreen School District/Outdoor School Church groups/retreat camps Families/reunions Camps for handicapped children	Barrack-like dormitories Staff sleeping area Dining and meeting area with kitchen facilities
Camp Melacoma Washougal, Washington	120	170	Conference/ Retreat Center Day-Long Meetings Outdoor Schools Camp Fire Camps Family Reunions/ Weddings Summer Youth Camps Church Retreats Target market is primarily Youth groups	Nieman Lodge (kitchen, dining, bedrooms, showers) Wineberg Lodge (sleeps 5) Rotary House (sleeps 5) 13 Cabins (13 bunks each)

Cispus Conference & Learning Center Randle, Washington	60	336	Outdoor school facility for most Washington School Districts Boy Scouts/Girl Scouts Forest Service/fire fighting training camp Indian Affair Group/Water resource camp Natural Helper Group/various sports camps Will only rent facilities for educational purposes	Education building Dining hall with kitchen Gym Health Room 7 dormitories w/ showers Trailers
OREGON				
Camp Yamhill Yamhill, Oregon	210	220	School districts in five Oregon for outdoor school programs Church groups/weekend retreats Summer camps run by the facility (5 weeks) for children	Six cabins Shower and restroom area Staff cabin Small meeting lodge Large dining lodge
YMCA Camp Westwind Otis, Oregon	410	150	Church, educational, & civic organizations Families/Reunions, weddings Outdoor School programs Conference and retreat center YMCA Overnight children and family camps	12 Rustic cabins WyEast Cabin Vi's Place Walsh Lodge Neskowin Lodge Trillium Lodge Wilson Lodge (Dining hall) Friar Tuck (Infirmary) Cascade Head (shower and bath facilities)
Camp Namanu Sandy, Oregon	600	300	OMSI* outdoor school camps for Vancouver School District during the fall weekdays Girl Scout/Boy Scout	Heated Lodge w/kitchen (sleeps 12) 2 Lodges with fireplace, kitchen,

Camps	bathroom (sleeps 6 to 12)
Campfire, non-profit, and religious organizations	2 Lodges w/woodstove, kitchen, bathrooms (sleeps 10 to 24)
Target market is primarily for youths ages 8 to 18	3 bunkhouses (8 bunks each) and 36 cabins (4-10 bunks each)
During the summer it's a formal program teaching youth important skills such as self-respect, problem-solving, commitment to environment	5 treehouses (sleeps 4-8 each)

OMSI runs outdoor school programs for Vancouver School District at Camp Namanu during the weekdays September through November 1st. These programs are at 100% occupancy. They also run camps and outdoor school programs March through June at facilities located in Central Oregon for other schools but are looking for more business.	Meeting lodge for 300 Raker Lodge meeting lodge for 300 plus a kitchen Campcraft Cottage Weavery House Nature House
OMSI provides staff for instruction but the school district must provide counselors.	
Camp Namanu provides staff for maintenance and cooking.	

1/ See appendices C.01 through C.05 for more specific information
SOURCE: Hobson Johnson & Associates

Camp Bonneville Market Analysis
HOBSON JOHNSON & ASSOCIATES
July 17, 1997

Outdoor Schools Appendices -- Case Studies

- Appendix C.01 Camp Wa-Ri-Ki
- Appendix C.02 Camp Melacoma
- Appendix C.03 Cispus Conference and Learning Center
- Appendix C.04 Camp Yamhill
- Appendix C.05 YMCA Camp Westwind

**APPENDIX C.01
OUTDOOR SCHOOLS/CAMPS
CASE STUDY**

NAME OF FACILITY:	CAMP WA-RI-KI
CONTACT:	Dick Lahti 360-687-2188
LOCATION:	Washougal, Washington Located 40 miles from Vancouver, approximately 17 miles up the Washougal River
SIZE:	25 acres
MAXIMUM CAPACITY:	125 guests for overnight stay
USER GROUPS/ACTIVITIES:	Kawanis Club for Skamania County Evergreen School District Outdoor School Church Camps Special Needs Camps for Handicapped Children Family Reunions
PERIODS OF USE:	Most people are from the Vancouver/Clark County area Open end of February through October for rental
RECREATIONAL AMENITIES:	Located on Washougal River (fishing) Open field available for soccer, volleyball, Frisbee, etc. Indoor basketball court Outdoor bonfire area
ROOM AMENITIES/FACILITIES:	Old barrack area for dormitories. Bottom floor has 115 bunk beds for children and separate shower and changing areas for males and females with 5 to 10 shower and toilet stalls each. Top floor has several rooms for adults and counselors with private showers and bathrooms. There are also two reading rooms on the bottom floor in between the male and female sleeping areas.
RATE STRUCTURE/INSURANCE:	Separate building for a dining and meeting area with kitchen facilities. \$200 fee for each camp plus an additional \$5 per night per person. In 1998 the fee will be raised to \$6 per person and in 1999 to \$7 per

person, where they plan to hold it steady for a few years.

Groups must turn in a one million dollar insurance binder, a use-agreement contract, and the \$200 fee 30 days before the use of the camp.

USAGE LEVEL:

Wa-Ri-Ki is usually 100% full during July and August with children and church camps. Evergreen School District fills up most of the weekdays during the fall and spring months with outdoor school programs but there are still openings during these times, especially on the weekends. Church retreats and family reunions are the most common groups during the weekends during the fall and spring months.

COMMENTS:

The camp is closed November through the end of February because of snow.

There is an on-site caretaker for maintenance purposes only. Each group must bring there own staff for cooking and coordinating activities.

SOURCE: Hobson Johnson & Associates

APPENDIX C.02
**OUTDOOR SCHOOLS/CAMPS
CASE STUDY**

NAME OF FACILITY: CAMP MELACOMA

CONTACT: Mary Beaddor
Owned and operated by Mt. Hood Council of Camp Fire
360-693-1419

LOCATION: Washougal, Washington
Located 40 miles from Vancouver on the Washougal River

SIZE: 120 wooded acres

MAXIMUM CAPACITY: 170 for overnight guests

USER GROUPS/ACTIVITIES: Conference/ Retreat Center
Day-long meetings
Family Reunions/Weddings
Outdoor Schools/ Individual schools in the Battleground School District; not entire district
Camp Fire Camps
Summer Youth Camps
Church Retreats
All camps are primarily for youth groups

PERIODS OF USE: Rentals are available February through November (weather permitting)
The camp is closed in December and January due to snow.

RECREATIONAL AMENITIES: Located on Washougal River (fishing)
Terrain is rocky and uneven so not conducive to ground sports (soccer, softball)
Man-made pond
Outdoor pool
Canoeing and hiking

ROOM AMENITIES/FACILITIES: Buildings:
Robert A. Nieman Lodge
• Equipped to serve conventions, business and sales meetings.
• Industrial style kitchen and dining area that serves 170 people.
The kitchen facilities is definitely a draw for people.
• Restrooms, showers, 2 bedrooms, a wood stove and a sleeping loft.
• Overnight accommodations: 20-30 people

Wineberg Lodge
Stone fireplace, fully equipped kitchen, restroom with shower, and five beds in sleeping loft.

Rotary House
* Beds for five and a restroom with a bath.

13 Primitive Cabins
• Each cabin has 13 bunks; no heat
• Adjacent to outdoor cooking areas

SOURCE: Hobson Johnson & Associates

APPENDIX C.03
OUTDOOR SCHOOLS/CAMPS
CASE STUDY

NAME OF FACILITY: CISPUS CONFERENCE AND LEARNING CENTER

CONTACT: Sara
360-497-7131

LOCATION: 2142 Cispus Road
Randle, Washington 98377
Located in the Gifford Pinchot National Forest near the northeast side of Mount St. Helens

SIZE: 60 acres

MAXIMUM CAPACITY: 336 guests for overnight stay

USER Cispus Learning Center is available for day use by groups and organizations.

GROUPS/ACTIVITIES: There are overnight camps available for people of all ages, including elementary schools, middle & high schools, college programs, adult programs, and programs for senior citizens. All programs must be educationally related.

User groups include:
 * Outdoor school facility used by almost every school district west of the Cascades in Washington and by a few school districts in Oregon (i.e., Rainier School District).
 * Boy Scouts/Girl Scouts
 * Forest Service/Fire fighting training camps
 * Indian Affair Group /Six week water resource learning camp each year
 Natural Helper Groups/ Basketball and other sports related camps come to use the challenge rope course for weekend camps.

PERIODS OF USE: Open year round for rental; seven days a week

RECREATIONAL AMENITIES: Gym for basketball, volleyball, badminton, etc.
Challenge Rope Course/Used for technique and team building training
Hiking Trails
Field for outdoor recreational activities

ROOM AMENITIES/FACILITIES: Facilities include meeting rooms, films, library, computers, scientific and recreational equipment, rest rooms, trails and grounds.

Buildings:
 Education Building (library, conference room, restrooms, computers, etc.)
 Dining Hall with kitchen (Holds 350 people); Cooks are Provided; family style dinners
 Classrooms/Conference Rooms
 Health Room
 Gym
 7 Dormitories (each dorm sleeps 44 children plus 4 staff members; 336 beds total)
 Dorms are split into halves; one side for male/female
 * Shower and restroom facilities located in the dorms: each side has six showers, four sinks, four restrooms, and two urinals.
 Self contained trailer or motorhome pad
 * Trailers are heated and equipped with a table and chairs, stove, refrigerator, beds with mattresses (no bedding), shower, bath and toilet.

Rate Structure/Insurance: Cispus Conference and Learning Center: Program:

Elementary Schools	Daily Fee:
Elementary Age Programs*	\$12.75
Middle & High Schools	\$14.25
Youth Programs*	\$15.00
Adult programs	\$20.00
College Programs	\$35.00
Senior Citizen Programs	\$28.00
	\$25.00

*Elementary Age and Youth categories are for programs not associated with public or private schools, and therefore have higher rates. Schools that are members of the Association of Washington School Principals get reduced rates.

Daily Ropes Course Fee:

Group Size:	Fee:
7 to 12	\$150.00
13 to 24	\$200.00
25 to 36	\$250.00
37 to 48	\$300.00
49 to 60	\$350.00
Traveling Ropes	\$250.00

Daily Leadership Program Fee:

Group Size:	Fee:
1 to 40	\$150.00
41 to 300	\$3.50 per person

Service Charges for Day Use Groups:

Group Size:	Elementary:	Middle/Jr. High:	Adult:
1 to 19	\$10.00	\$20.00	\$30.00
20 to 30	\$30.00	\$40.00	\$50.00
31 to 40	\$50.00	\$60.00	\$70.00
41 to 50	\$60.00	\$70.00	\$90.00
Over 50	\$1.30 each	\$1.50 each	\$2.00 each

Trailer Rentals:

Self contained trailer	Fee:
Trailer with water, sewer, & electrical	\$7.00
Two bedroom trailer	\$11.00
Three bedroom trailer	\$25.00
	\$30.00

Groups must provide their own insurance policies.

USAGE LEVEL:

Cispus Center had 20,000 guests last year.
From February until Thanksgiving weekend, they run at about 80% occupancy.
Outdoor schools take up almost all of the weekdays. From Thanksgiving until February, only the weekends are usually full. Three to five different groups are often there at once.

Most groups (especially outdoor schools) take the same week every year. When a certain week opens up, there is a holding file for new groups. However, existing groups get first choice at the new available week.

COMMENTS:

Staff is provided for cooking, the challenge course, and for maintenance.
Each group must clean (dishes and cabins) for themselves.

SOURCE: Hobson Johnson & Associates

APPENDIX C.04
**OUTDOOR SCHOOLS/CAMPS
CASE STUDY**

NAME OF FACILITY:	CAMP YAMHILL
CONTACT:	Jim 503-662-4302
LOCATION:	19651 Old Railroad Grade NW Yamhill, Oregon Located 20 miles west of Newberg toward the Oregon Coast
SIZE:	210 acres
MAXIMUM CAPACITY:	220 guests
USER GROUPS/ACTIVITIES:	Outdoor School for five Oregon counties during the fall and spring months *Washington County School Districts (i.e. Beaverton School District) *Columbia River School District *Tillamook *Cottage Grove, etc. Weekend retreats for church groups (usually Church of Christ) Five weeks summer camps run by the facility (wrestling, church, and band camps) Children in summer camps are from Vancouver and Portland. Most outdoor schools are for children in the Portland area.
PERIODS OF USE:	Open everyday April through mid-November and on the weekends from mid-November through March. The facilities are not rented out during the five weeks of summer camps in July and August.
RECREATIONAL AMENITIES:	Yamhill River runs through the property (fishing, swimming) Hiking Pond is stocked with trout and bass each year (fishing, boating) Open field (softball, football, soccer, golf, field hockey, Frisbee, etc.)
ROOM AMENITIES/FACILITIES:	Six cabins (sleeps a total of 192 people) * 16 bunks on each side for male and females (32 bunks per cabin) * 20 X 25 common meeting place with couches in the center * Separate building for restrooms. Female facilities have 10 tiled showers with 8 toilets and 8 sinks. Male facilities have 7 tiled showers with 12 urinals and toilets, and 8 sinks. Staff cabin (sleeps 24 people) * Shower and bathroom facilities Small lodge for a meeting area (holds 150 people) Large dining lodge with kitchen (holds 250 people)
RATE STRUCTURE/INSURANCE:	\$20 per person, per day (includes overnight lodging and 3 meals per day) Camp Yamhill provides food for all camps except outdoor school camps. School districts are on individual contracts with Camp Yamhill with a different rate structure and they must provide their own food. However, the camp will provide the cooks. The owner's wife is the head cook and the food has an outstanding reputation. Insurance is only provided for the summer camps that Camp Yamhill runs. All other camps must provide their own insurance.
USAGE LEVEL:	Camp Yamhill had 240 days of activity last year. They average 120 people a day at their summer camps. The outdoor schools run in the fall and spring and average 140 people a day during the weekdays. Weekend occupancy rates during the fall, winter, and spring vary greatly. The camp is only open on the weekends during the winter months.
COMMENTS:	Staff is provided for cooking and maintenance only. All other staff is the renter's responsibility.
SOURCE:	Hobson Johnson & Associates

APPENDIX C.05
**OUTDOOR SCHOOLS/CAMPS
CASE STUDY**

NAME OF FACILITY: YMCA CAMP WESTWIND

CONTACT: Miriam Callaghan, Camp Director
541-994-2393

LOCATION: 2353 N. Three Rocks Rd.
Otis, Oregon 97368
Located 90 miles from Portland, 6 miles north of Lincoln City
Across the Salmon River from Cascade Head on the Oregon Coast
Must take a two minute boat ride to get to the facility.

SIZE: 410 acres

MAXIMUM CAPACITY: 150 guests

USER GROUPS/ACTIVITIES: User groups include church, educational, and civic organizations as well as families.

Activities:
Conference Workshop/ Retreat Center (fall, winter, and spring weekends)
Outdoor School Programs (fall and spring weekdays)
Group Camping (fall and spring weekends)
Weddings (fall and spring weekends)
YMCA Overnight Camps (July and August weekdays and weekends)
• Ranch Sessions
• Mother/Child Camps
• Science Camp For Girls
• Nature Studies
• Teen adventure and general youth camps for entering grades 2-12.
• Family Camp

PERIODS OF USE: Open everyday, year round. Facilities are reserved for YMCA camps during the summer months (July and August) and are not available for rental use. The camp is available for rent September through June.

RECREATIONAL AMENITIES: Located on the Salmon River across from Cascade Head, the terrain offers a unique opportunity for outdoor recreation and education. Estuaries, wetlands, tidepools, and miles of hiking trails are ideal for educational experiences. Recreational activities include hiking, canoeing, a challenge course, an archery range, an arts and crafts facility, and horseback riding (\$20 for a trail ride and \$3 for a corral ride).

ROOM AMENITIES/FACILITIES:
12 Rustic Cabins (sleeps a total of 108 people)
* 9 bunks per cabin
* Groups must provide their own sleeping bags and blankets
WyEast Cabin (sleeps 5 people)
*Only sleeping facility with running water. Contains a full bathroom, fireplace and kitchenette. Camp director stays here during the summer months.
*Located on a cliff with an amazing view of the Pacific Ocean.
Vi's Place (sleeps 12 people)
* Wood stove and electricity
Walsh Lodge (sleeps 12 people)
Neskowin Lodge (sleeps 2 people)
Trillium Lodge (sleeps 2 people-cooks quarters)
Wilson Lodge (holds 150 people)
• Dining room, kitchen, and meeting area
• The lodge is heated by three fireplaces Friar Tuck (Infirmary) Cascade Head (shower and bath facilities)
* 4 showers, 4 toilets, and 4 sinks for each gender

RATE STRUCTURE/INSURANCE: Two packages:
40-150 people: \$12.80 per night per person plus a \$50 kitchen fee
Wyeast Cabin for 1-5 people: \$110 for a weekend or \$45 per night on a weeknight. Two night stay minimum.

USAGE LEVEL: Camp Westwind summer camps are at 100% occupancy. Outdoor schools and church groups must make reservations 6 months to one year in advance. First priority is given to return customers.

COMMENTS: Camp Westwind provides staff for horseback riding, canoeing, maintenance, security, and an on-site manager. Groups must bring in their own cooks and coordinators. Supplies are not provided by Camp Westwind for the arts and crafts center. The camp will supply toilet paper, cleaning supplies, cooking and eating utensils, mattresses, firewood, and river transportation.

SOURCE: Hobson Johnson & Associates

**E. D. Hovee
& Company**

951 Officers Row P.O. Box 225 Vancouver, WA 98666
(360) 696-9870 (503) 230-1414 - Fax (360) 696-8453

Economic and Development Services

MEMORANDUM

To: Doug Nichols, Otak, Inc.
Janice Davin, LRA Coordinator
From: Eric Hovee
Subject: Camp Bonneville Market Verification
Date: September 29, 1997

Over the course of the past several weeks, we have had the opportunity to conduct Phase I services related to market and financial feasibility affecting reuse of the Camp Bonneville property. This preliminary memorandum provides observations and recommendations resulting from this initial review.

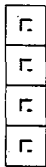
Purpose: The purpose of this evaluation has been to prepare a preliminary memorandum covering three primary topics:

- a. Review of existing market/feasibility research providing our views based on preliminary reconnaissance to verify, augment, or question conclusions reached to date.
- b. Provide more focused market and feasibility observations as to: (1) reuse of existing buildings; (2) outdoor schools; (3) firing range; (4) new building for retreat/meeting uses; and (5) considerations for outdoor camping activity.
- c. Options and recommendations for subsequent Phase II in-depth market/financial feasibility evaluations.

Approach: The approach we have taken to this initial project familiarization and market verification phase has involved, first, a review of existing market research documentation, notably the draft Camp Bonneville Reuse Memorandum dated July 17, 1997, prepared by Hobson Johnson & Associates, and the Camp Bonneville Range Utilization Report prepared by the Firing Ranges Subcommittee. We also have drawn on pertinent market survey research that we conducted in November 1995 for Identity Clark County.

Second, we have conducted interviews with persons knowledgeable about or representing several key potential reuse concepts. Persons interviewed have included Janice Davin (LRA Coordinator), Doug Nichols (Otak project manager), Tim McVicker (Clark County Sheriff's Office), Janet Renfro (Columbia Arts Center), Diane Mortenson (interest in camping use), and Gary Wallace (Evergreen School District).

Unfortunately, it has not proved possible to tour the Camp Bonneville site and key buildings over this recent time period. Observations are offered on a preliminary basis - subject to potential change as a result of more detailed site analysis and subsequent market/financial feasibility evaluation.



Review of Existing Market/Feasibility Research

Market & Feasibility Evaluation

Options & Recommendations

Surveys

Camp Bonneville Market Analysis
E.D. Hovee & Company
September 29, 1997

A. Review of Existing Market/Feasibility Research

As indicated, we have had a chance to review market research conducted to date as part of the Camp Bonneville reuse planning process. We find that both the Hobson Johnson evaluation and the range utilization report provide useful background information. Our comments are aimed at questions yet to be addressed that could affect market and financial feasibility of a more refined project concept.

The Hobson Johnson report addresses potential uses including a conference center, campground, and outdoor school. The methodology of the analysis involves identification of potentially comparable facilities and projected growth and demand versus supply for each facility type over the 1997-2002 time period. Major observations regarding this analysis are noted as follows:

Conference Center: It is not clear that the six surveyed centers fully cover the range of types of locally generated conference and retreat activities being experienced in Clark County. In terms of local groups using facilities with overnight lodging, we note that the facilities most cited (by 146 respondents to a 1995 survey of local Clark County organizations) include the DoubleTree Inn at the Quay, Shilo Inn, Skamania Lodge, and Edgefield. Other more retreat oriented facilities that might be added to this list of comparables could include Anderson Lodge (Lewis River) and Flying L Ranch (Goldendale).

If day uses were to be considered, it is noteworthy that facilities commonly reported as being used by existing organizations include: Alderbrook, Clark College, Luepke Center, Camas Community Center, PUD, Royal Oaks, Columbia Arts Center, ESD 112, and Marshall Center. In addition to the Marshall House (included with the Hobson Johnson inventory), there is the recent addition of the Water Resources Center and imminent addition of the O.O. Howard House.

For maximum financial performance, we would suggest that a Camp Bonneville conference center be targeted, first, to users of overnight lodging and, second, fill-in demand with the remainder of the calendar allocated to suitable day use events.

We agree with the Hobson Johnson conclusion that operating revenues are not likely to cover both operating expenses and debt service (to repay capital costs). The degree to which capital costs would need to be supported by non-project revenues is a matter that could be considered in further detail as part of a subsequent financial pro forma analysis (accompanied by detailed cost estimates associated with specific reuse or new development concepts).

We do not necessarily agree with the Hobson Johnson conclusion that "existing facilities are not adequate to support the forecast of level of usage." While we have not had the benefit of an on-site tour (which is important for the qualitative portion of this judgment), we note that the

Hobson Johnson report does not provide any clear rationale for this conclusion. More on this topic later.

Campgrounds: We do not have current empirical data regarding campgrounds to either confirm or deny the information provided by Hobson Johnson & Associates. While the marketing methodology appears reasonable, it is based on a key assumption that the national stabilized occupancy rate of 46% year-round is equally applicable to Clark County's situation. The only reason Hobson Johnson concludes that there is unmet demand in Clark County is that current year-round occupancy for unserviced sites of 47% is one percentage point above the national average - therefore leading to a calculation of unmet demand for 75 sites. This is a thin difference on which to build an argument for existing unmet campsite demand in Clark County. In terms of future unmet need, the report does not provide an explanation for the projected addition of 100 sites to the current inventory.

In summary, while the campground methodology appears reasonable, the potential variability in the assumptions used could easily exceed the calculations of unmet demand indicated. In effect, the methodology used does not by itself provide a compelling case for added campground facilities in Clark County. However, the Hobson Johnson financial figures do indicate that campground facilities may experience net operating income (after deducting expenses) equal to 50-60% of total revenue. If supported by more detailed financial pro forma analysis, this would indicate revenue potential to support a significant share of capital as well as operating expense, and thereby a project opportunity worthy of more detailed evaluation.

Outdoor School: The market analysis approach applied by Hobson Johnson is most problematic for this last use considered due to: (a) lack of adequate information on market comparables as noted in the Hobson Johnson report; (b) reported lack of comparable national data; and (c) importance of specific camp users (e.g., school districts, church, education, and civic groups of individual camp facilities). We would suggest an alternative approach be applied to evaluate a site and user-specific outdoor school concept for Camp Bonneville. More on this later.

Firing Range: As noted, potentials for retention and/or development of some combination of firing ranges is covered in considerable detail by the subcommittee's Camp Bonneville Range Utilization Report. For a variety of firing range concepts described, information is presented regarding user and associated operating revenue potential. Some revenue is provided as to anticipated capital cost.

Very little information is provided regarding anticipated operating costs. In part, this is because some significant operating cost factors - such as methods of assuring security - involve assumptions regarding other property use, not just the firing ranges. A related question of importance is whether volunteers will supplant the need for paid staff.

Overall, we have some concern that uses regenerating relatively nominal gross revenues will not be able to support any reasonable level of operating expenses, let alone capital costs. For example, the widely used Camp Withycombe firing range generated not even \$7,000 in 1996, more than offset by expenses of \$15,000. Even at a \$15,000 level, operating expenses would not be adequate to cover even a single full-time administrative or maintenance position.

The notion of creating a regional law enforcement training center and/or public sports club is intriguing. To be financially viable, the project would likely need a lead organizing entity (public

or private) with significant financial and political resources. Police agencies and the public likely would need to accept considerably higher rates than those to which they are currently accustomed. In capital costs (e.g., fencing) and operating expenses (e.g., safety officers), adequate measures to assure public safety at all times would need to be more thoroughly addressed.

All of these issues should be evaluated within the context of a more comprehensive budget pro forma approach - to clearly and systematically identify the full range of capital costs, operating revenues, and expense associated with each firing range option considered.

Overall Observations: For all of the uses considered to date, we also offer two overview observations. These are intended to serve as a prelude to the more focused market/feasibility assessments by type of use that follow in the next section.

1. While the approach that Hobson Johnson applies in the market assessment is appropriate for some real estate assessments, basing a determination of Camp Bonneville reuse potential on current unmet demand plus future growth may miss the point as to what Camp Bonneville reuse is all about-- a community resource to better serve the needs of Clark County organizations and residents. It would be for policymakers to determine whether Camp Bonneville investment were justified to better serve Clark County residents here at home -even if other facilities outside of Clark County are available.

The rationale applied for a financially viable firing range concept may be just the opposite. Facilities serving just the local market have very little opportunity to be financially supportable; an aggressively marketed truly regional facility might have financial merit.

2. No use can be considered in isolation; each must also be evaluated in the context of effects on all other Camp Bonneville and neighboring uses. Of greatest significance is the effect that the firing range noise will have on the viability of conference/retreat, campground, and outdoor school uses. A related question is the potential conflict between desire for access to multiple recreation opportunities versus safety issues of unexploded ordnance and safety near firing ranges. These questions cannot reasonably be settled without all users - including the FBI firing range and off-site neighbors - at the table together.

Camp Bonneville Market Analysis
E.D. Hovee & Company
September 29, 1997

B. Market & Feasibility Evaluation

As a second task, we are to provide more focused market and feasibility observations as to reuse of existing buildings, outdoor school, firing range, new building for retreat/meeting uses, and considerations for outdoor camping activity. For ease of analysis, we have organized this task around the topics covered in the first section.

Retreat Center: The Hobson Johnson report suggests development of a new conference center with capacity for about 80 overnight beds. We suggest broadening this discussion to encompass new or existing facilities, with designation as a possible retreat center.

Hobson Johnson estimates that Camp Bonneville would need to capture about 6% of the regional market (as of 1997) to achieve an implied year-round stabilized occupancy in the range of 23%. We would suggest that primary focus be on demand generated out of the local Clark County market with less concern over potential competitive effects on other existing retreat centers regionally.

While no in-depth research has been conducted of the Clark County retreat market to date, a survey that we conducted in 1995 on behalf of Identity Clark County provides some insight into the market potential for a larger retreat center in Clark County. The 1995 survey involved mailing of 533 questionnaires to 90 ICC investors, 167 major Clark County employers (of 50+ employees), and 276 Clark County organizations and groups. Of the 533 questionnaires sent out, 146 were completed for a response rate of 27%.

Key findings of this survey pertinent to a potential Camp Bonneville retreat center can be summarized as follows:

- Clark County employers and organizations hold, on average, 18 events per year. Of these, an average of seven events annually are held *off-premises*.
- The most commonly reported purposes of these events can be grouped as follows:
 - Celebrations, retreats, and special events (39%)
 - Business and similar meetings (32%)
 - Education, training, conventions, and seminars (29%)
- A retreat center could most strongly compete for a share of the first and third categories, which together account for over two-thirds (68%) of locally generated activity.
- The *most common* size of group reported is 40 persons per event. Larger employers tend to have somewhat greater attendance at their events. For all groups, attendance at the single largest event held annually also is larger at about 200 persons per event.
- Fully 37% of events occur all day, while another 27% require more than one day.
- Only 37% of respondents indicated that existing facilities in Vancouver/Clark County are adequate to meeting their event needs. Of those that indicated existing facilities are not adequate, needs for larger indoor space, good service, greater selection, and

inexpensive meeting space seem to be primary themes.

- Similarly, the most important features desired for Clark County facilities are: (a) flexible meeting space; (b) food facilities/service with a range of desires ranging from onsite food service staff to flexibility for catering, group-prepared or potluck-style events; (c) desire for low/reasonable cost meeting/banquet spaces; and (d) good quality/updated audio-visual equipment.

Our perspective is that a Camp Bonneville retreat center would not be directly competitive with a convention or special events center as is currently being considered for the downtown Vancouver/Esther Short Park area. Camp Bonneville would appeal to groups that want a more relaxed, casual, and rustic environment, and which operate on a more modest budget. A retreat center would have a higher mix of use by governmental and non-profit organizations, with less use by for-profit business functions.

However, our perspective also is that the retreat business is changing rapidly. To capture the greatest market potential, a retreat center should offer:

- A significant component of private and semi-private rooms (with associated private bath) and de-emphasis of dormitory-style housing.
- Ability to host two or more groups simultaneously, but each with its own facility identity, including separate dining area if possible.
- High quality, natural (almost pristine) surroundings, with opportunities for individual recreation/meditation (e.g., walking trails) as well as for organized recreation.

Reuse or redevelopment of existing barracks facilities could be as appealing (perhaps more appealing to many users) than new construction, provided that:

- Historic integrity of existing structures is maintained.
- Market needs noted above are adequately addressed
- Cost of renovation is not prohibitive, but in line with operating revenue support plus other outside funding sources.

The single biggest potential impediment to marketability of a Camp Bonneville retreat center is posed by the firing ranges that also may be part of the site reuse program. Our view is that groups will be deterred from using Camp Bonneville if noise from the firing range(s) is noticeable whether indoors or outdoors. Some groups also may express concern over safety of meeting participants.

Even if noise and safety issues could be fully addressed, some groups may still prove resistant because of philosophic objections to discharge of firearms. In booking conference and retreat activities, it is important to remember that just one or two individuals in an organization may effectively veto use of a particular retreat site if their objections are strenuous enough.

If a determination is made by the LRA to proceed with further consideration of retreat center activity, we would suggest that:

1. Potential Clark County users of a retreat center be surveyed (by mail) to ascertain types of facilities desired, extent of day/overnight/seasonal use, rates supported, and level of interest with/without a firing range on site.
2. Financial pro forma projections be prepared to assess the comparative financial

performance of new versus renovated retreat facilities. Pro formas would involve projection of operating revenue and expenditures, together with an assessment of capital costs and proportion of such cost (or debt service) that could be supported by retreat center operations.

Outdoor Campgrounds: Of all the revenue-generating uses suggested for consideration, campgrounds represent the most straightforward concept for ready evaluation. Our viewpoint is that, from the perspective of market and financial feasibility, a go/no-go decision could be made based on a financial pro forma evaluation.

The financial pro forma would provide projections of operating revenues and expenses, at a reasonable level of year-round stabilized occupancy consistent with comparable facilities. The net income (after deducting expenses) could be applied to recovery of capital cost (or debt service).

As with the retreat center concept, the major complicating factor for a Camp Bonneville campground lies with the impact that firing range noise may have on campground utilization. The effect is particularly negative if there is no predictability as to when significant firing range activity will occur.

A related concern is with safety of campground users from areas of firearms activity and unexploded ordnance. This issue could be managed more easily if group camping activities only were allowed. Ongoing security needs will likely be greater to manage camping and associated use of the entire Camp Bonneville site by individual campers.

Steps that we believe would be appropriate to better assess market and financial feasibility for campground use can therefore be summarized as follows:

1. Prepare financial pro forma to indicate financial performance at an assumed occupancy target and/or occupancy required to achieve break-even operation. As part of the pro forma, both capital and operating costs associated with site security would need to be addressed.
2. Survey users of comparable campgrounds to ascertain potential user interest in a Camp Bonneville facility with and without firing range activity also occurring onsite.

Outdoor School: Evaluating an outdoor school suggests a somewhat different approach to market and financial evaluation - because the list of prospective users is very specific and limited. Attracting users also is clearly not predicated on overall market growth, but capturing local school districts and other organizations currently going elsewhere.

It is our understanding that the Vancouver School District uses the OMSI Camp Namanu facility in Sandy, Evergreen students attend Camp Wa-Ri-Ki on the Washougal River in Skamania County, Washougal goes to Black Lake in Tacoma, Camas has gone to the Cispus Learning Center, and Battle Ground has used Black Lake.

The types of facilities used by school district-run outdoor camps in spring and fall also are often attractive to church, scouting, and other organizations, particularly for youth-oriented summer camps. In contrast with a retreat center, youth typically sleep dormitory-style, though private and semi-private rooms may be reserved for camp counselors and other staff. Some organizations will use a staff kitchen/food service facility if available; others, often including

school districts, prefer to do their own preparation, serving, and cleanup.

The Hobson Johnson report indicates that it may be difficult for an outdoor school/youth camp to recover operating costs. This would mean no ability to defray even a portion of capital cost from revenues. However, the observation is based on anecdotal information, rather than detailed cost data for comparable facilities.

The key to ascertaining feasibility of an outdoor school/youth camp facility lies in contacting the Clark County organizations who most likely would be interested to ascertain:

- Degree of interest in using Camp Bonneville (including conditions for use).
- Rental/use fees supportable.
- Facilities required (sleeping, dining, educational, recreational).
- Willingness to contribute to property maintenance/rehabilitation.
- Other issues (e.g., firing range noise, security, compatibility with other onsite uses).

In summary, next steps suggested for ascertaining market and financial feasibility for outdoor/youth camp uses would involve:

1. Contacting and interviewing key Clark County organizations involved in the operating of outdoor and youth camps.
2. Preparing financial pro formas based, in large measure, on the results of these in-depth interviews.

Firing Range(s): This is the last major potential revenue-generating use that has been suggested for market and financial feasibility evaluation. This use presents special problems and opportunities because of its potential incompatibility with retreat, camping, and outdoor/youth camp activities.

If it is determined that the FBI range will stay and that this use is incompatible with other revenue-generating activities, then greater consideration should be given to development of truly first-class regional facilities to serve both law enforcement and public interests.

We would suggest that pro forma projections of capital costs together with operating income and expense projections be prepared for each type of firing range to be considered separately. A consolidated projection also would be prepared for all operations combined. This approach makes it possible to determine which firing range uses are the most financially viable.

In addition to basing the pro formas on what users currently are willing to pay, we also suggest a pro forma approach that determines what user charges need to be collected in order for facilities:

- To generate revenue adequate to cover both capital and operating expense.
- To generate revenue adequate to break even on an operating basis, assuming that capital costs are covered by grant and other outside funding sources.

In summary, next steps suggested for further market/financial feasibility evaluation of firing range uses are:

1. Have subcommittee refine operating income/expense and capital cost estimates for each

firing range use to be considered (with greater emphasis on identifying ongoing operations and maintenance costs).

2. Compile results using a standardized pro forma budget worksheet approach enabling financial evaluation firing range uses individually and collectively.

Camp Bonneville Market Analysis
E.D. Hovee & Company
September 29, 1997

C. Options & Recommendations

In summary, the options that appear to be available for securing revenue-generating uses with Camp Bonneville appear to be threefold:

- Develop firing range uses only.
- Develop a combination of retreat center, campground, and outdoor/youth camp facilities based on financial viability of each use independently, combined with compatibility as a multi-use concept.
- Develop both firing range and other revenue uses only if it can be clearly demonstrated that marketability (and resulting financial viability) of the revenue uses are not unduly compromised by proximity to firing range (in terms of both noise and safety considerations).

Next steps that we suggest as a basis for proceeding with all of the use components discussed are essentially twofold:

1. Determine degree to which firing range (FBI and other) and other revenue-generating uses can be accommodated on the Camp Bonneville property.
2. Proceed with more detailed market survey/financial pro forma analysis for those uses which are viewed as warranting further consideration.

As we have discussed on the phone, I am out of the office somewhat indefinitely (for at least the next several weeks) for health reasons. If you need to reach me, please leave a message at the office.

In my absence, Madeleine Dulemba is directing all administrative functions in our office. Paul Dennis is responsible for technical services.

Our staff is experienced in both the market survey and financial pro forma activities which are outlined as possible next steps.

We appreciate this opportunity to assist with the Camp Bonneville reuse evaluation. Let us know as we can be of further assistance.

E. D. Hovee & Company

Economic and Development Services

MEMORANDUM

To: Doug Nichols
From: Madeleine Dulemba
Subject: Camp Bonneville Market Verification
Date: November 6, 1997

Approximately fifty surveys regarding the use of Camp Bonneville as a rustic retreat center were mailed to Clark County organizations of various types: business organizations, arts groups, and non-profits. A copy of the survey is attached. (A similar survey was sent to area school districts in Oregon and Washington; their replies will need follow-up, because very few have been received.)

So far, 18 organizations have replied regarding the rustic retreat center. What follows is a summary of the information we have received.

Retreats: Three quarters of organizations responding hold retreats; 64% of those hold retreats once a year, 36% hold them twice a year. Three times as many organizations hold retreats in the fall as hold retreats in the spring and winter. No organization holds a retreat in summer. Attendance at retreats averages 48.

Conferences: With reference to conferences, 94% of organizations hold conferences, with two holding conferences yearly, two twice-yearly, and 76% holding conferences more often. Organizations most often hold conferences throughout the year, with a preference for spring and fall. Conferences generally last a half day to two days, with a few organizations holding conferences that last a week.

Accommodations: Organizations were split nearly 50-50 on the questions of bunkbeds and shared showers. Half said they would use a facility with these kinds of accommodations, while half said they would not.

Firing Ranges: Of those expressing an opinion (77%), 92% would not use the facility if firing ranges were in the area. Only one organization expressing an opinion would use the facility under these conditions.

Fees: With reference to the day and overnight rates for the camp, about the same percentage expressed willingness to pay the higher as opposed to the lower rate outlined in the survey. a substantial number of organizations did not complete this question.

Comments: Most organizations' comments had to do with typical meeting needs, ranging from flip charts and furniture to audiovisual equipment. Several mentioned aspects of comfort: private baths, good food, single or double-bedded rooms. Some mentioned access to hiking trails and water, activities for families during the day, or performance space outdoors.

To:	Clark County Organizations
From:	Madeleine Dulemba
Subject:	Rustic Retreat Center
Date:	October 27, 1997

As you may know, the United States Army is in the process of decommissioning Camp Bonneville. E.D. Hovee & Company has been retained to examine possible alternative future uses for the camp.

A retreat center is among the uses that have been suggested. We are surveying area organizations regarding their possible interest in using the camp for retreats, seminars, and similar meetings.

First, a little information on Camp Bonneville.

- Located in east Clark County, north of Camas, on the slopes of Mount Baldy near the headwaters of Lacamas Creek.
- Driving time from downtown Vancouver is approximately 20 minutes.
- The camp area (3.800 acres) is heavily wooded. At this time, it contains:
 - Plainly-furnished dormitory buildings, as well as separate buildings containing meeting rooms, kitchens, toilet facilities, and communal showers.
 - Limited hiking and creek access, some fishing, and a meadow for picnicking
 - Shooting ranges used for training by area law enforcement agencies.

With this as background, please complete the survey enclosed, and return it (by November 3) in the stamped, self-addressed envelope. If you need further information, please call me at 696-9870. Thank you for your assistance.

Camp Bonneville Market Analysis
E.D. Hovee & Company
October 27, 1997

Rustic Retreat Survey

- Does your organization hold retreats? ☐ Yes ☐ No
- About how often are retreats held? ☐ Yearly ☐ Twice a year ☐ More of
- When are retreats held? ☐ Spring ☐ Summer ☐ Fall ☐ Win
1. Approximately how many people attend? _____
- Does your organization hold seminars or conferences? ☐ Yes ☐ No
- About how often are they held? ☐ Yearly ☐ Twice a year ☐ More of
- When are they held? ☐ Spring ☐ Summer ☐ Fall ☐ Win
2. Approximately how many people attend? _____
- How long do the retreats/ seminars/ conferences held by your organization last? ☐ 1-2 Days ☐ Weekend ☐ 3 Day
3. ☐ Other _____
- Indicate whether your organization would use a rustic retreat facility for its meetings under the following conditions:
- a. bunkbeds ☐ Yes ☐ No
- b. shared showers ☐ Yes ☐ No
- c. firing ranges used by law enforcement agencies for pistol and rifle training ☐ Yes ☐ No
4. ☐ Yes ☐ No
5. Comparable Oregon and Washington facilities charge \$23 to \$35 per day, per user, for day no meals included. Please indicate the amount your organization would be willing to pay:
- ☐ \$23-\$30 per day ☐ \$30-\$35 per day
- other: _____
6. Comparable Oregon and Washington facilities charge \$40-\$60 per attendee, per day, for over stays, including three meals each day. Please indicate the amount your organization would be pay:
- ☐ \$40-\$50 per day ☐ \$50-\$60 per day
- other: _____
7. Please tell us in the space below what facilities and attractions your group would need in such center.

Optional:

Your Name:

Organization:

Phone:

E. D. Hovee & Company

Economic and Development Services

360-696-8453

MEMORANDUM

To:	Outdoor School Planners and Coordinators
From:	Madeleine Dulemba
Subject:	Outdoor School Site
Date:	October 27, 1997

As you may know, the United States Army is in the process of decommissioning Camp Bonneville. E.D. Hovee & Company has been retained to examine possible alternative future uses for the camp.

A site for Outdoor School is among the uses suggested for Camp Bonneville- We are surveying area school districts regarding their possible interest in using the camp for outdoor school.

First, a little information on Camp Bonneville.

- Located in east Clark County, north of Camas on the slopes of Mount Baldy, near the headwaters of Lacamas Creek.
- Driving time from downtown Vancouver is approximately 20 minutes.
- The camp area (3,800 acres) is heavily wooded. At this time, it contains:
 - Plainly-furnished dormitory buildings, as well as separate buildings containing meeting rooms, kitchens, toilet facilities, and communal showers.
 - Limited hiking and creek access, some fishing, and a meadow for picnicking.
 - Shooting ranges used for training by area law enforcement agencies.

With this as background, please complete the survey enclosed, and return it (by November 3) in the stamped, self-addressed envelope. If you need further information, please call me at 696-9870. Thank you for your assistance.



Appendix D

FIRING RANGE NOISE STUDY
AT THE CAMP BONNEVILLE MILITARY RESERVATION
IN CLARK COUNTY, WASHINGTON

June 30, 1997

Prepared for:

OTAK
303 E. EVERGREEN BOULEVARD
VANCOUVER, WASHINGTON 98660-9613
Project NO. 96135

VGO, Inc
ENGINEERS
543 Third Street
Lake Oswego, OR 97034

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Figure A-6 Time Line from a Rifle Shooting

Figure A-7 One-Third Octave Band Sound Pressure Level from Pistol Shooting

Figure A-8 One-Third Octave Band Sound Pressure Level from Pistol Shooting

Photographs

Photo 2.1 Measurement one at the south edge of the reservation

Photo 2.2 Measurement two, 50 feet from firing range #7

FIRING RANGE NOISE STUDY
VGO, Inc, ENGINEERS
June 30, 1997

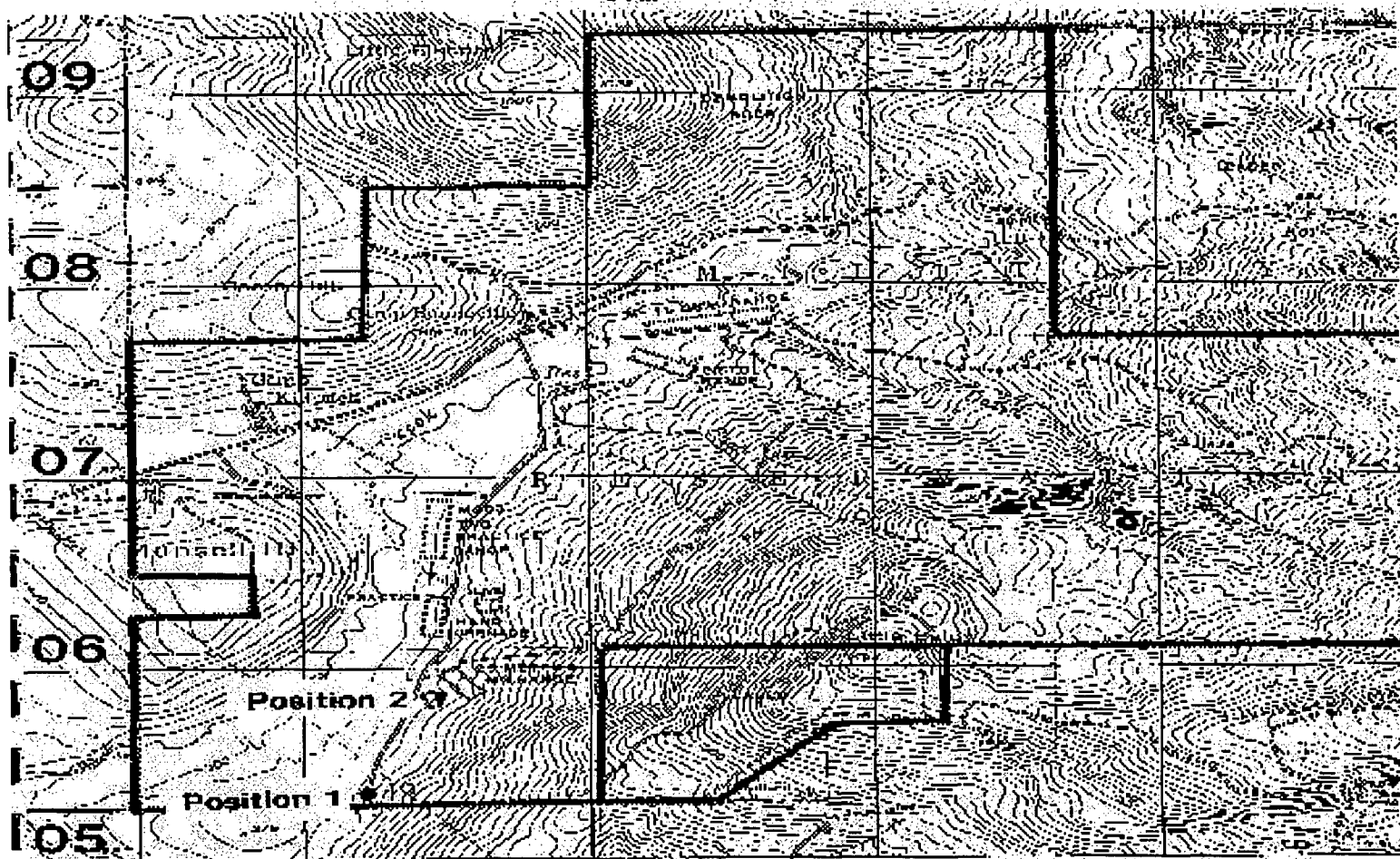
1.0 INTRODUCTION

Clark County in Washington State will take control of Camp Bonneville Military Reservation from the US Army. This reservation includes many shooting ranges which may continue to be used after the county takes control. The County is conducting a study to establish alternative uses for this military reservation and has contracted OTAK to provide alternatives uses for the property.

OTAK has contracted VGO, Inc. to study the potential noise problem from the shooting ranges, and to provide them with sound related information that can be used for design of alternative uses.

FIRING RANGE NOISE STUDY AT THE
CAMP BONNEVILLE MILITARY RESERVATION
IN CLARK COUNTY, WASHINGTON

Figure 1-1
Topographical Map of Camp Bonneville Military Reservation
Scale: 1" = 2,000'



FIRING RANGE NOISE STUDY
VGO, Inc, ENGINEERS
June 30, 1997

2.0 EXISTING NOISE LEVELS

2.1 Measurement Procedure

On June 18, 1997, VGO, Inc. conducted sound pressure level measurements at two locations:

1. Location one was at the south end of the reservation at the end of the road from Camp Bonneville (See photograph 2.1). This location was selected to evaluate the sounds affecting residential locations outside the reservation closest to the shooting range.
2. Location two was 50 feet west of Shooting Range #7 (See photograph 2.2). This location was selected to establish the sound pressure levels generated from the range during shooting.

The sound was recorded into a calibrated tape recorder through the sound level meter for analysis in the acoustical laboratory of VGO, Inc. The microphones were placed about five feet above ground level, the same height of human ears. Frequency components of the sound were analyzed in the laboratory for octave band, and one-third octave band components.

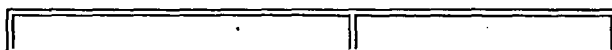
2.2 Instrumentation.

The following is a list of instruments used for the measurements:

Precision sound level meter and analyzer	Bruel & Kjaer, Model 2209
Precision Integrated Sound Level Meter	Larson Davis, Model 300B
One-half inch microphone preamplifier	ACO Pacific, Inc., Model 7046
One-half inch microphone preamplifier	Larson Davis, Model 2559
Sound level calibrator	ACO Pacific, Inc., Model 511E
Sound level calibrator	General Radio, Model 1652-A
Field Tape Recorder	Marantz, Model PMD430
Field Tape Recorder	Marantz, Model PMD210

2.3 Measurement results

1. At location one, (south end of the reservation,) measured sound was between 41 dBA to 66 dBA. Ambient sounds included birds, dog barking, TV or Stereo system from a house nearby, a car leaving the house, children playing and airplanes. The sound level range at this location is as follows:



Birds	41 dBA - 43 dBA
Dog Barking	50 dBA - 66 dBA
A car	50 dBA - 58 dBA
Children	45 dBA - 53 dBA
Airplane	42 dBA - 58 dBA
Shooting at Range #7	47 dBA - 54 dBA

Please note that the sound from airplane flying above is louder than the sound from the shooting range.

2. At location two, (50 feet West of Shooting Range #7,) the sound level was as follows:

Pistols	100 dBA - 111 dBA
Rifles	100 dBA - 116 dBA

The following table 2.1 shows the octave band of the loudest pistol and rifle. Table 2.1
50 feet from shooting Range
Sound Pressure Level in dB re-20x10-6 Pa

	Octave Band Center Frequency Hz									
	31.5	63	125	250	500	1000	2000	4000	8000	A-Weighted
Pistol	87	90	92	98	105	108	103	102	95	111 dBA
Rifle	90	95	98	102	109	111	112	107	99	116 dBA

FIRING RANGE NOISE STUDY
VGO, Inc, ENGINEERS
June 30, 1997

3.0 SOUND LEVEL CRITERIA

The State of Washington, Chapter 173-60 (WAC 173-60) maximum environmental noise level has been adapted by Clark County as their standard for noise exposure. This standard provides exemption [WAC 173-60-050(l)(b)] for sound created by the discharge of firearms on authorized shooting ranges between the hours of 7:00 a.m. and 10:00 p.m.

This regulation allows outside noise level reaching a residential area from commercial activity to be 57 dBA. This level is conservative and we recommend using this 57 dBA level for designs for outdoor use.

For designs for indoor activity we recommend that the outside level not exceed 65 dBA. This would allow an indoor noise of 45 dBA, as recommended by US Department of Housing and Urban Development, without any additional noise attenuation other than that those found in customary building techniques.

FIRING RANGE NOISE STUDY
VGO, Inc, ENGINEERS
June 30, 1997

4.0 ANALYSIS

4.1 Outdoor Sound Propagation

Outdoor sound propagation, if loud enough, can be radiated to neighborhood locations and can neighbors. Outdoor sound transmission is influenced by three broad types of natural effects: distance effects, atmospheric effects, and terrain and vegetation effect.

Distance effects - As a rule, sound from a localized source spreads out as it travels away from the source. Sound pressure levels diminish with distance according to fundamental relationships. The "inverse square law" dictates that the sound will be reduced by six-dB for each doubling of the distance from the source.

Atmospheric effects - Sound transmission near the earth's surface involves essentially three paths: 1) direct path, 2) ground-reflected sound, and 3) sound paths that are refracted (bent) either away from the ground (upwards) or back down towards the earth. Wind, temperature, and other factors influence outdoor sound propagation. Wind and temperature variation can cause sound waves to bend and can influence changes in sound levels at large distances. These are normally short-term effects and do not provide reliable noise control. However, they help explain the variations that occur in outdoor sound propagation and measurements.

Wind effects - A steady, smooth flow of wind, equal at all altitudes, would have no noticeable effect on sound transmission. In practice, however, wind speeds are slightly higher above the ground than at the surface. The resulting wind speed gradient tends to "bend" sound waves over large distances. Sound traveling downwind is bent down towards the ground, while sound traveling against the wind is bent upward above the ground.

Temperature effect - Constant temperature with altitude would produce no effect on sound transmission. Temperature gradients can produce bending in much the same way as wind gradients do. Air temperature near the ground is normally cooler than at higher altitudes, and the denser air near the ground tends to bend sound waves down towards the ground. With "temperature inversions," the warm air above the surface bends the sound waves down towards the ground. These effects are negligible at short distances but they may amount to several dB at a distance over hundreds of feet.

Figure 4.1 Wind and Temperature effect

✕ fig4-1.gif - 58.8 K

Terrain Effects - Terrain may provide a natural barrier by intercepting the direct sound path from the receiver. The natural barrier may be a hill, an earth berm, or a large mound of earth. The barrier may also be some form of a solid structure, such as a wall or building. Such an outdoor barrier may reduce the sound level by up to 24 dB.

Wood and Vegetation effects - The following table 4.1 shows the approximate insertion loss (in dB per 100 feet path length) for sound transmission through Medium-dense Woods

Table 4.1
Approximate insertion loss (in dB per 100 feet path length) for sound transmission through Medium-dense Woods

Octave Frequency Band Hz	Sound Path through Medium-dense Woods
31.5	0.9
63	1.2
125	1.5
250	1.8
500	2.4
1,000	3.1
2,000	4.0
4,000	4.9
8,000	6.1

The values in table 4.1 are for each 100-foot path length. It might be expected that for very long (2,000 to 5,000 feet) that sound losses could reach values up to 50 dB or more. However, field e shown that actual sound reduction will be no more than about 20 to 25 dB.

5.0 RECOMMENDATIONS

In order to be within the target goal of outdoor noise level less than 57 dBA, any outdoor use area should be separated from the shooting range by at least 2,000 feet of medium density wooded land. This is without any natural or other barrier to block the sound. If the terrain between the use area and the shooting range is not wooded, the distance of separation should be approximately one mile. Any hilly terrain between the shooting range and any proposed use area would increase the sound loss and reduce the distance of separation required.

For indoor uses, an outdoor noise level target of 65 dBA, would require that the use location be separated from the shooting area by at least 1,000 feet of medium density wooded land. This is without any natural or other barrier to block the sound. The distance of separation would increase to 3,500 feet without the benefit of the medium density wooded land. As above, a barrier or hilly terrain between the use and the shooting range will aid in sound reduction.

Once the design of the use of Camp Bonneville in the vicinity of the shooting range is final, we would like to review those plans and will then be able to forecast the noise from the range to the housing being developed closest to the range.

Figure A-1
Time Line of the First Pistol Shooting

Printed by: Spectra Plus
Thu Jun 19 13:05 1997

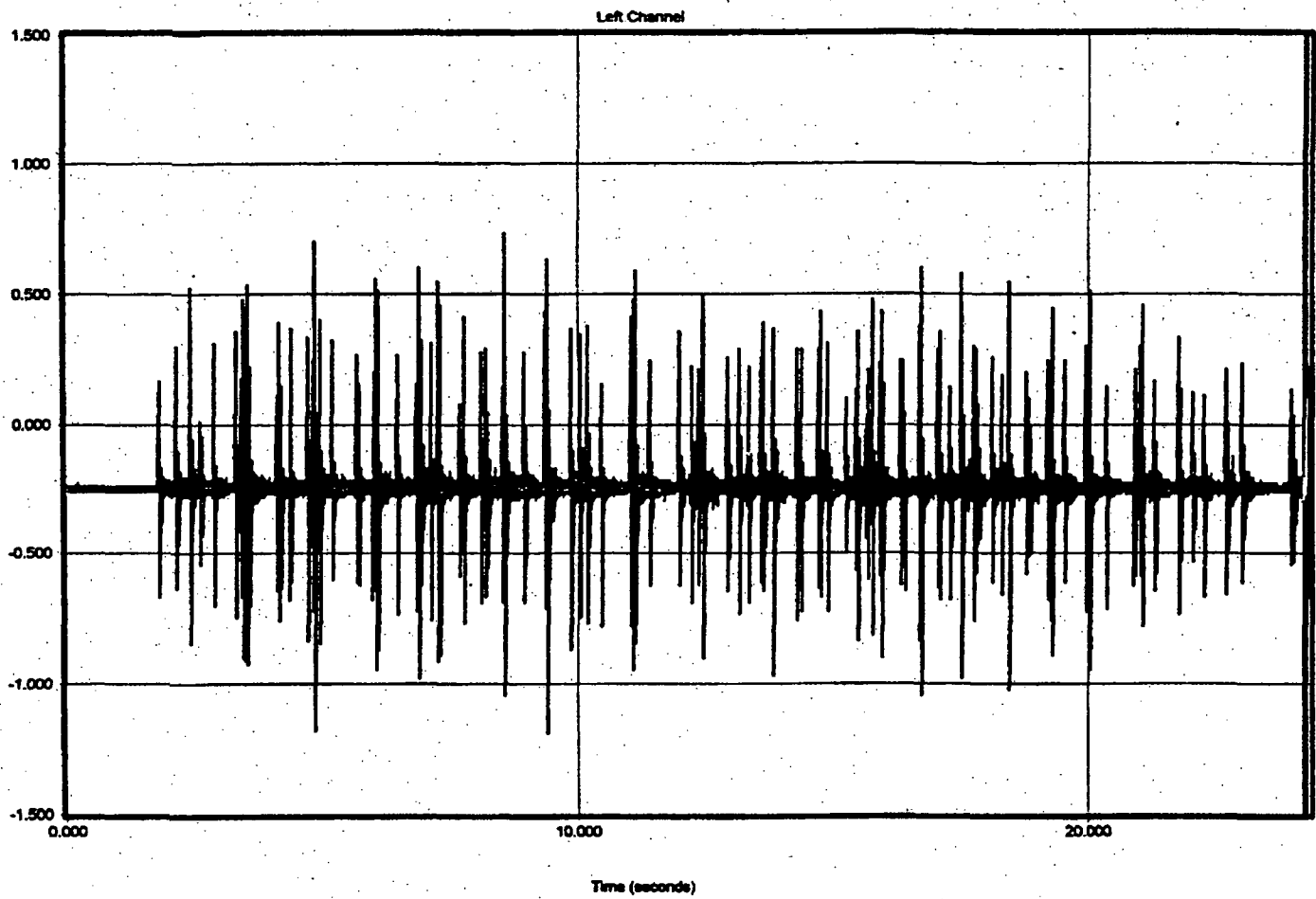


Figure A-2 Time Line of the Second Pistol Shooting

Printed by: Spectra Pl.
Thu Jun 19 21:17:38 1996

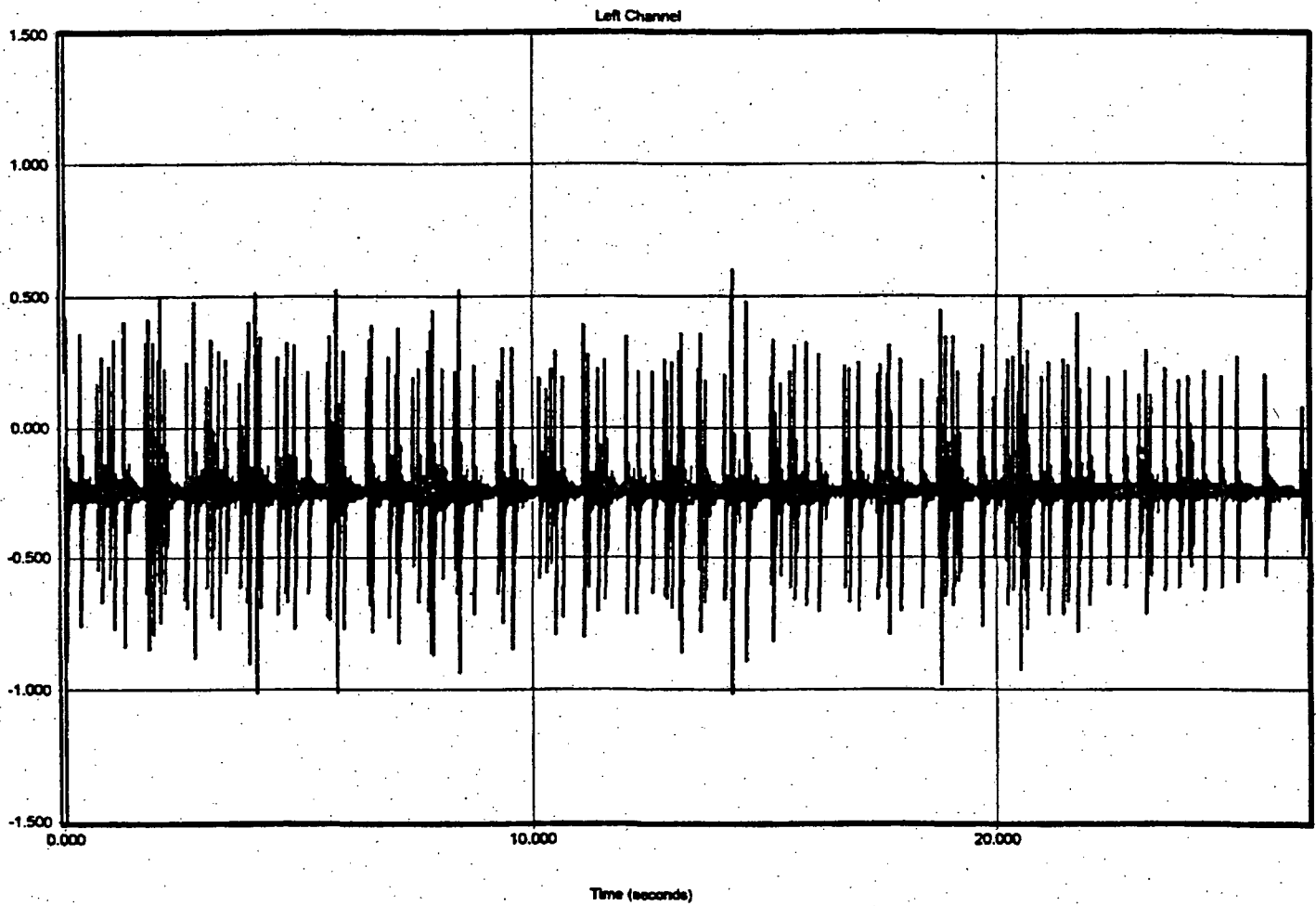


Figure A-3
Time Line from the First Rifle Shooting

Printed by: Spectra Plus
Thu Jun 19 21:48:23 1997

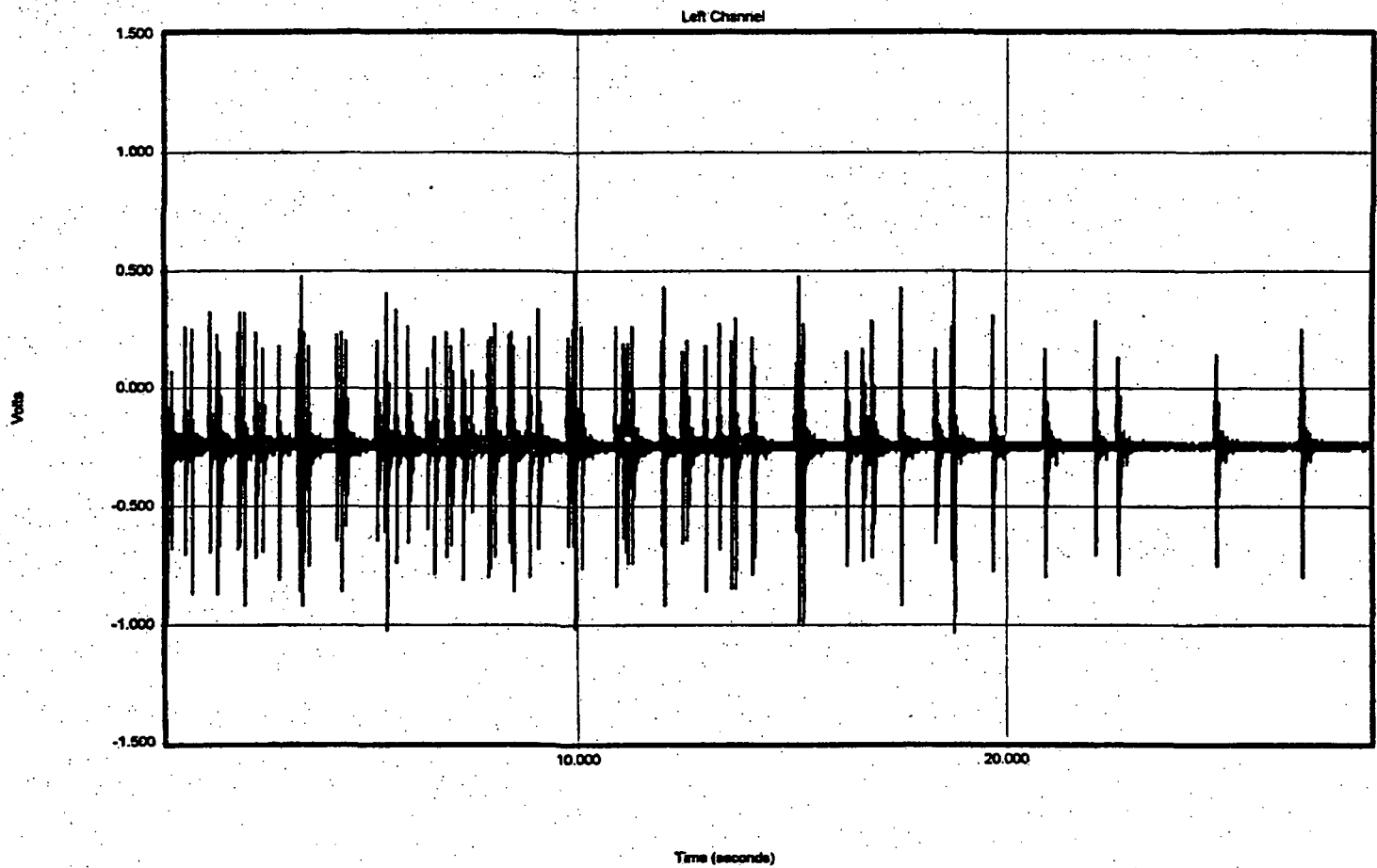


Figure A-4
Time Line for Automatic Rifle

Printed by: Spectra Plus
Thu Jun 19 22:14:00 1997

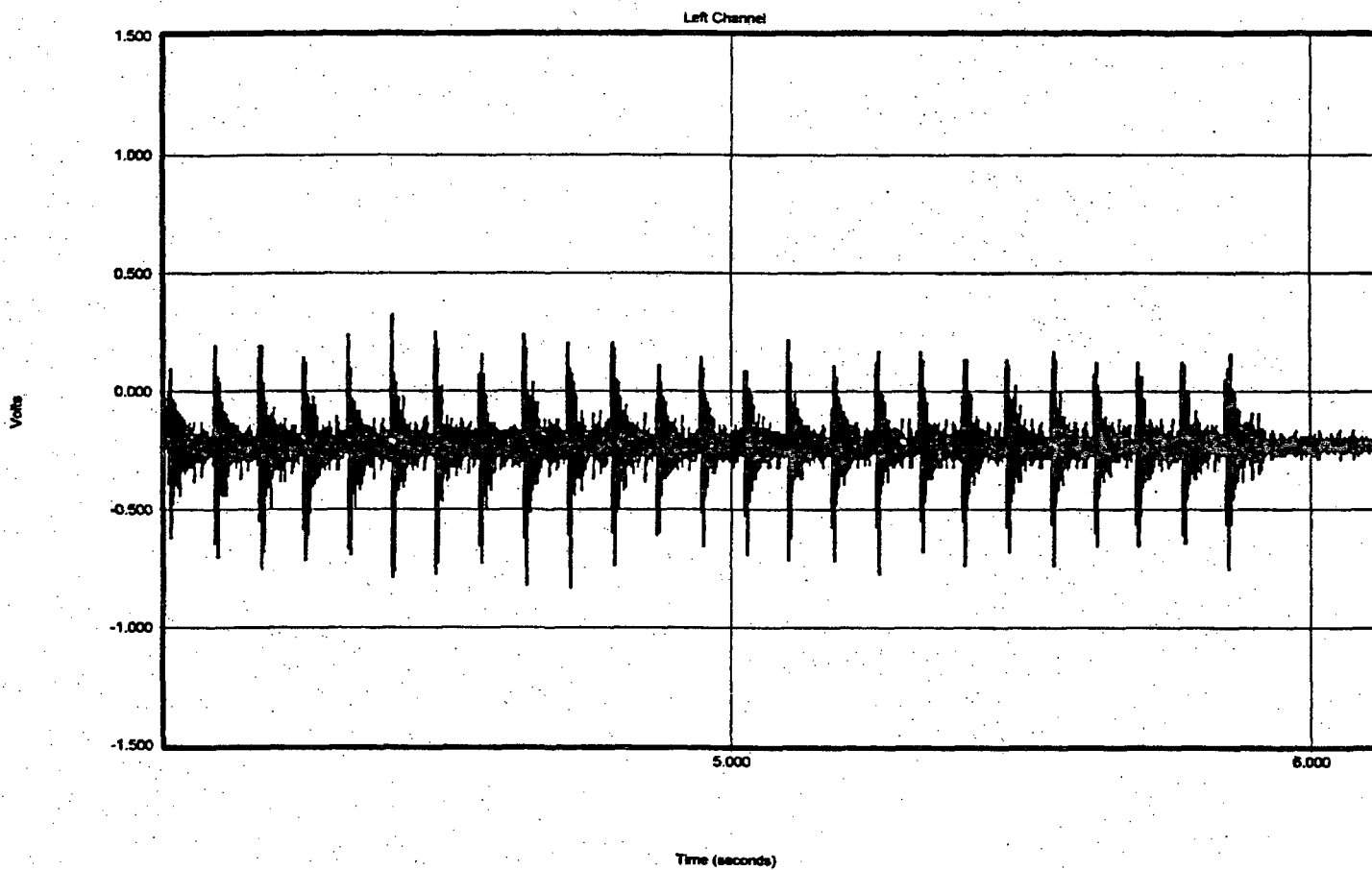


Figure A-5
Time Line of a Single Pistol Shooting

Printed by: Spectra Plus
Thu Jun 19 13:29:25 1991

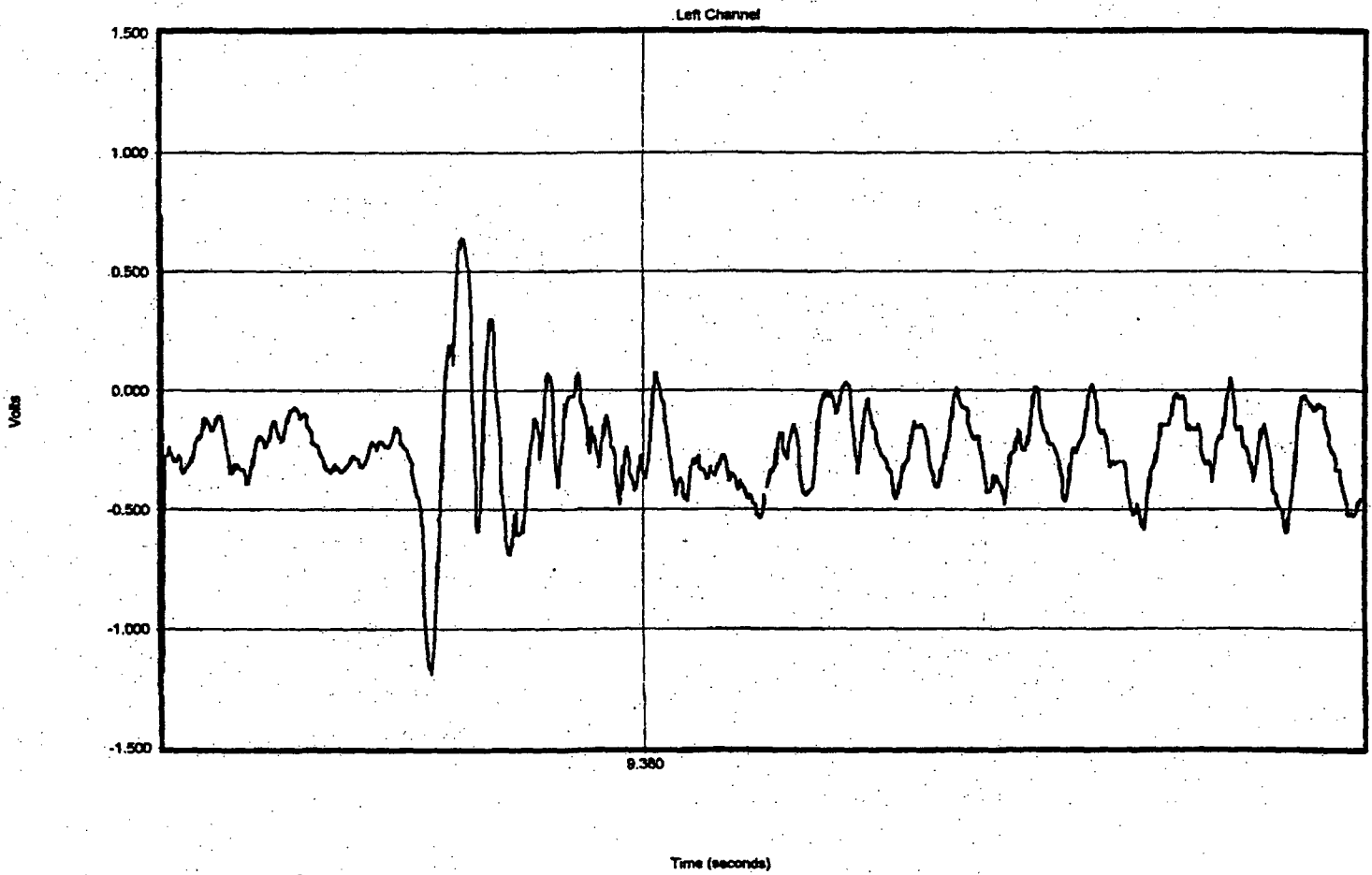


Figure A-6
Time Line from a Rifle Shooting

Printed by: Spectra Plus
Thu Jun 19 21:53:32 1997

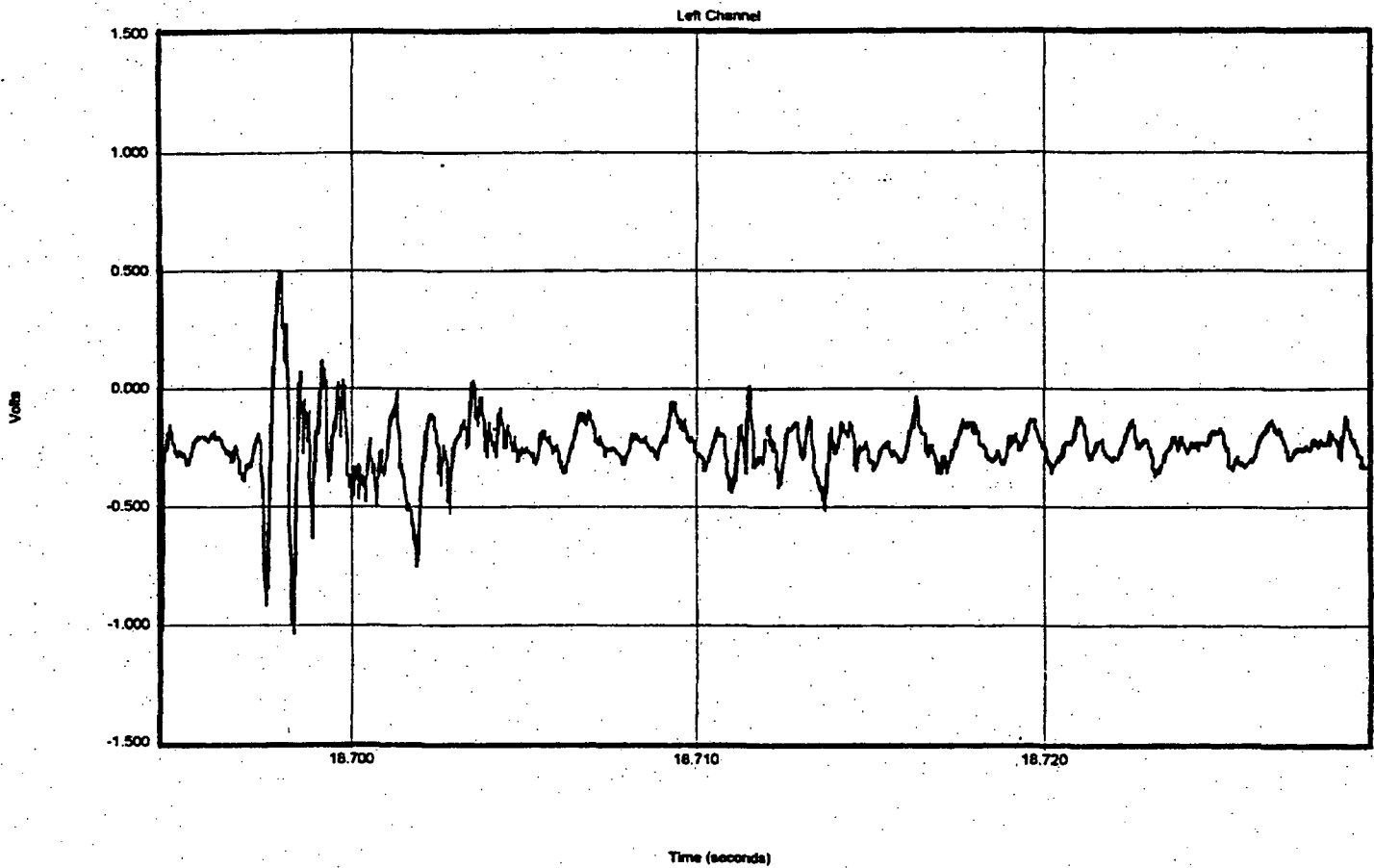


Figure A-7 One-Third Octave Band Sound Pressure Level from Pistol Shooting

Sampling: 44100 Hz
FFT size: 1024
Averaging: 1
Window: Uniform

Printed by: Spectra Plus
Thu Jun 19 21:45:43 1997

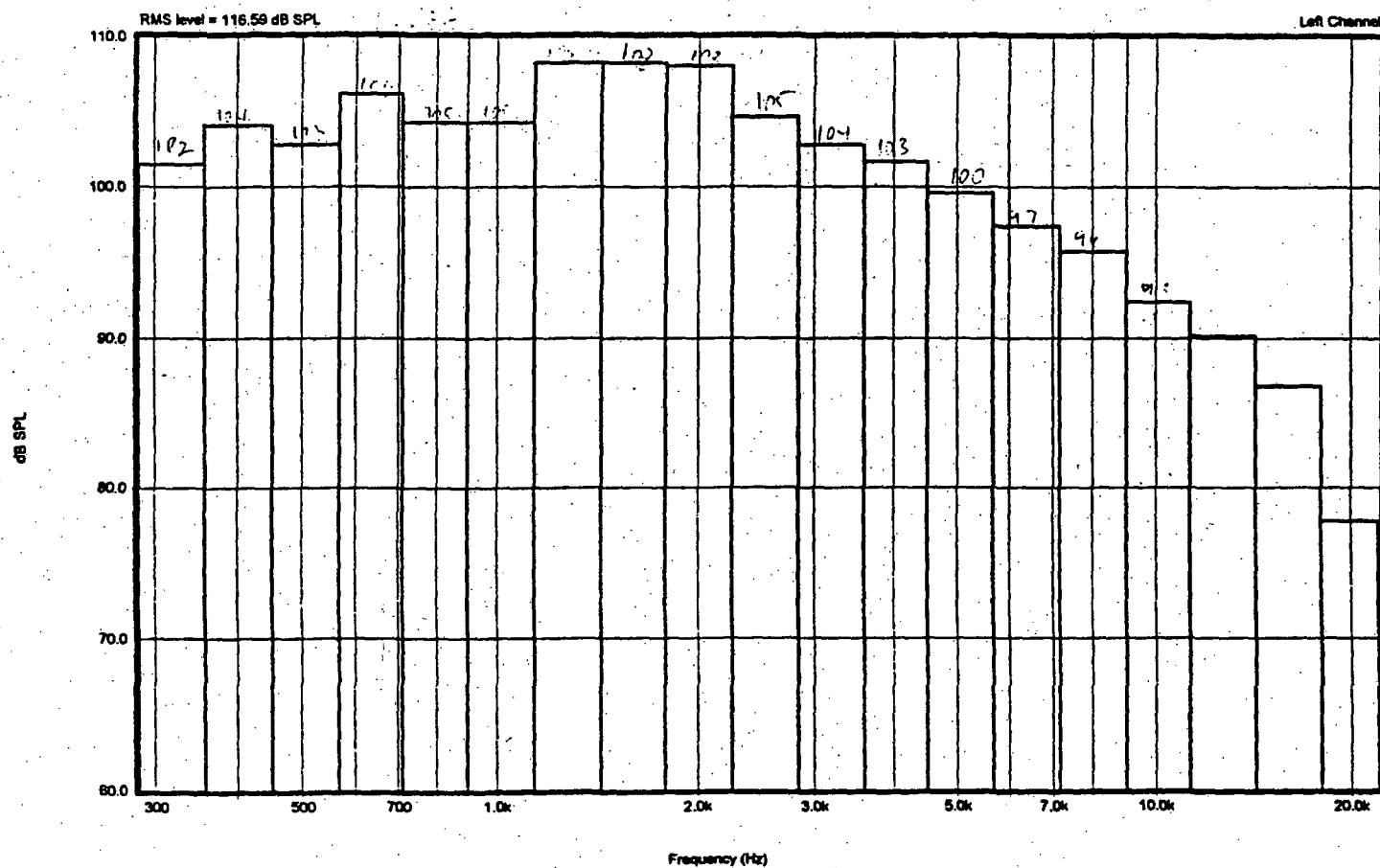
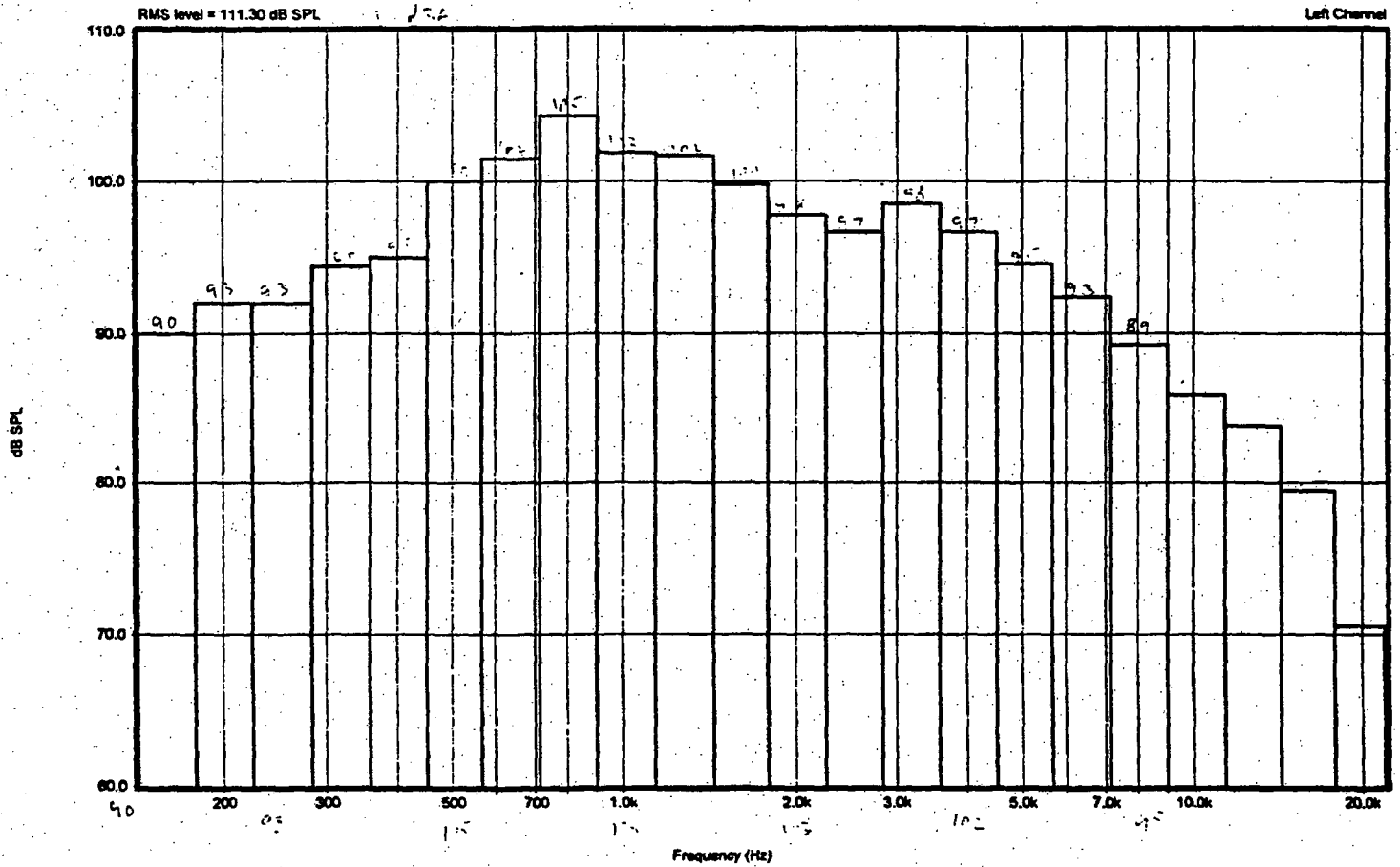


Figure A-8

One-Third Octave Band Sound Pressure Level from Pistol Shooting

Sampling: 44100 Hz
FFT size: 2048
Averaging: 1
Window: Uniform
Overlap: 0 %

Printed by: Spectra Plus
Thu Jun 19 21:08:52 1997



Photograph 2.1

Measurement one at the south edge of the reservation



Photograph 2.2
Measurement Two, 50 feet from firing Range #7



Appendix E

RANGE SAFETY REPORT

Camp Bonneville, Washington

December 14, 1997

PREPARED FOR

Ms. Janice Davin

Clark County

Department of Public Works

P. O. Box 9810

Vancouver, Washington 98666-9810

PREPARED BY

MCTAGGART & ASSOCIATES

P. O. BOX 231207

TIGARD, OREGON 97281

Project Overview

Findings

Recommendations

Conclusion

Attachment I Terrain Study

Attachment 2 Earth Berms

CAMP BONNEVILLE SAFETY FAN REPORT

December 14, 1997

PROJECT OVERVIEW

This project was assigned on December 5, 1997 by Ms. Janice Davin Clark County, Vancouver, WA. I was to review the proposed range complex plan, maps and aerial photographs of the Camp Bonneville, WA area to prepare overlays and a report of my assessment of the safety fans for the proposed ranges. I was asked to include my recommendations regarding any safety issues that were identified during the study.

I have reviewed all of the material submitted to me by Clark County regarding the proposed Camp Bonneville range facility. This plan calls for a public pistol range, a public rifle range, a law enforcement rifle range, law enforcement pistol ranges, a stationary target range for pistols, an FBI range and a "shoot house" range.

FINDINGS

1. I plotted the Surface Danger Zones (SDZ) fans for the planned ranges using the largest and most demanding dimensions for the types of firearms listed by memo from Janice Davin assuming an earth backstop is used. Weapons used were the 7.62 MM (.308) Match and 5.56 MM (.223) M855 ball ammunition for the M-16A1. This .223 round has a steel dart inside the lead bullet and a copper jacket. These were the two rifle fans considered.

The 7.62 is much larger and is the most difficult to meet established safety standards. The .357 Magnum ammunition was used on the pistol ranges since it has approximately 25 percent longer maximum travel distance. The other liked calibers of pistols and shotguns were reviewed but were not as demanding as the ammunition listed above (please see Overlay "A"). The large rifle fan and the safety circle from the "shoot house" demonstrates how much area a 360 degree shooting plan in the "shoot house" and the rifle fans require. I made the assumption of full circle shooting since it would be the most difficult to make safe in this area. Any restrictions on the use of the house might reduce this area but may have an adverse effect on the training of law enforcement officers who train on this range. The .357 Magnum has a maximum travel distance or X of 2,400 yards. This is approximately 25 percent larger than the 9MM. I adjusted the safety fan size of the .357 magnum. I used the same angles, but increased the other measurements in proportion to maximum travel (2,400 yards). This created a distance Y of 1,475 yards as the greatest distance that a ricochet would travel after hitting the earth back berm.

2. I plotted the effects of wide set target displays for the pistol ranges (please see Overlay "B"). This overlay addresses only the pistol ranges and not the rifle ranges or the "shoot house" range. I considered these ranges baffled, enclosed, or eliminated from the plan. Overlay "B" demonstrates how the wide set tactical targets have a significant effect on the area requirements. If this type of firing is to be conducted, I recommend that consideration be given to moving the range location or enclosing the ranges for the safety of the surrounding property and other Camp Bonneville uses and areas.

3. I studied the map provided and attempted to identify an improved layout for the range, decrease area requirements, and increase safety. The recommended plan is displayed on Overlay "C" with a compacted safety fan for the planned range facility. The overlay assumes that there is no 7.62 (firing). The fan for the 5.56 MM (.223) round is used on this overlay. The diagram shown does not include baffling on the rifle ranges. If the ranges were baffled, the size of the impact area could be reduced to the blue dashed line and the area with the red hash marks could be eliminated from the safety fan. The remaining area of the safety fan is generated by the .357 Magnum pistol requirement.

The .357 round requires approximately 25 percent more area than the 9MM or other pistol ammo. Overlay "C" also assumes that the "shoot house" will have a bullet proof roof in place, thus eliminating any escapement from this range. Officers could shoot in a 360 degree setting within the house and berm system.

The firing direction of each range was rotated 25 degrees to the north. This orientation moves the safety fans toward the center part of Camp Bonneville land and improves the usability of the ranges by reducing the effect of early morning sunlight in the eyes of the shooters on the range. The overall north to south length of the range facility was extended for clarity on the overlay. This was reduced to save space. To reduce the safety fan to this size requires all of the shooting be conducted at right angles to the back berm. This means that wide set target placements could not be allowed. Law enforcement range officers have a need to conduct this type of tactical training for the staff of agencies. The safety fans could be widened to allow for some tactical-type shooting with Clark County approval. The narrower the target set, the smaller the impact area. The range safety officers for user agencies should be questioned to determine how wide a setting they need and how many points they require. Perhaps one of the ranges could be custom engineered to meet this need.

The location of the range needs to be moved to the north a short distance. This would increase the distance between the south end of the ranges and the south boundary of the Camp Bonneville property and the other property owners in the area. The shape of the valley in which the range is located directs most of the noise northward into the center of the Camp. This will be a benefit to the property owners along the southern boundary. The noise from the ranges should be reduced by the earth between each range.

4. The earth berms shown on the plans for the range facility call for a 30 foot base and 15 foot height. This specification creates a 45 degree slope of the berms. The stability of the soil needs to be assessed to ensure that an "angle of repose" of 45 degrees can be maintained. The berm system provides safety for users of the range and others nearby. However, the berms do not have much to do with the safety fan requirements since it remains possible to elevate the muzzle slightly and cause a bullet to exit both the berm and the range. The angle required for a bullet to pass over a 15 foot berm that is 25 yards from the shooter is approximately 12 degrees. If the berm is increased to 20 feet as recommended in the NRA range design guidelines, this angle becomes 15 degrees.

The design and layout of the berms must provide for equipment access onto the berms and ranges. If the berms are to be baffled, the minimum clear space below the baffles and the floor of the range is 7.5 feet (a higher clear space is even more desirable).

5. The proposed range location is located in a small valley with the highest terrain on the east side of the valley. This is the side for which the safety fans are proposed. The highest elevation in this valley is directly east of existing Range 7 approximately 1,600 yards (4,800 feet). The highest point here is approximately 1,450 feet above sea level. The elevation for existing Range 7 is approximately 360 feet above sea level. The top of Bald Mountain is then 1,090 feet higher than the range. The elevated angle from the existing Range 7 location to the top of Bald Mountain is approximately 13 degrees. The maximum length of travel for the .357 Magnum is 7,200 yards (7,200 feet). The peak of Bald Mountain is only 4,800 feet away, therefore a bullet from a .357 Magnum could travel to the mountain. Attachment 1 diagrams this explanation of the terrain.

6. The vertical hazard for rounds that ricochet from an earth berm backstop are listed below. I have converted these measurements to feet to allow easier comparison to the height of Bald Mountain.

Type of Ammunition	Vertical Distance (In Feet)
--------------------	------------------------------

.22	315
.38	292
9MM	305
.45	328
.357 Magnum	381
12 Gauge Slug	446
5.56 h4M, (.223) M855 M-16A2 Rifle	1,155
7.62 MM (.308) Match Rifle	2,467

This data clearly demonstrates that a ricochet from a pistol round would probably not clear Bald Mountain. However, the rifle ammunition could certainly ricochet over the mountain.

RECOMMENDATIONS

1. The shape and height of the earth berms should be increased in size. I recommend a height feet, with a 15 foot wide flat top for equipment operation (berm maintenance). This will increase base measurement to approximately 55 feet. A diagram is provided to demonstrate this design see Attachment 2). The added height will provide additional safety to other users of the range fa those nearby. The added height should also reduce range noise since noise will be directed upw into the air and dissipate.

2. Rifles that fire the 7.62 (.308) ammunition should not be allowed to fire at the Camp Bonnevil range facility unless the rifle range used is fully baffled, tested and suitable for this type of ammu

3. The use of all armor piercing ammunition should be banned. The only exception might be the 16A2 ammunition that has a small steel dart inside. This is the only ball ammunition that will be available to the military when all of the M-16A1 weapons and ammunition are out of the system. Federal agencies may continue to have a need to train on this rifle and ammunition.

4. The roof of the "shoot house" should be constructed to make it bullet proof. This will allow th to be completely self contained and safe. The design should wrap down over the outside walls t contain any stray rounds.

5. The public rifle and pistol ranges and the rifle range for law enforcement should be baffled. If consideration is given to baffling the ranges, I can arrange a tour for you to view different types baffles in place at other facilities.

6. I recommend that you consider adding a combat shotgun range to your facility. Many of the la enforcement agencies and Federal agencies and agents use the shotgun. This type of range is currently lacking in available training facilities. The surface danger zone for the 12 gauge slug is smaller than the pistol ammunition listed in this report. The use of 00 Buckshot requires only 65 of safety fan area. If target loads of size 7-1/2 are used, only 300 yards of safety fan area are re

7. Noise on ranges is always a problem. I recommend a sound specialist be consulted to assist design of the ranges and treatment of the surfaces. Noise reflects, much the same as light rays.

more texture to a surface or wall, the better the noise absorption and reduction of its energy. I recommend you consider applying a treatment to all surfaces on the ranges and structures.

8. The property shown on the map as "DNR" should be obtained for permanent use by the Cam additional area will assist you in controlling encroachment problems and provide increased dept safety fans or for other uses that might be desired in the future.

CONCLUSION

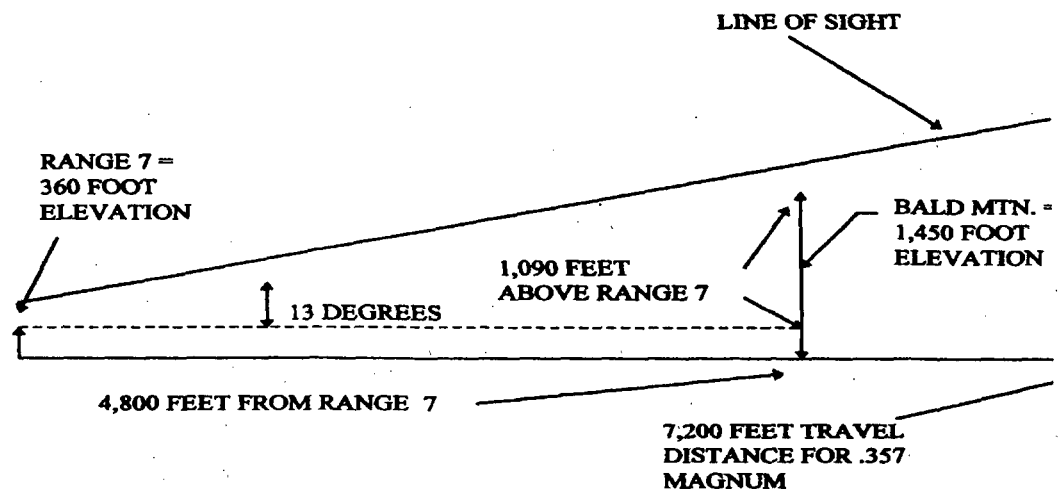
1. The range plan submitted for my review is not safe as designed. In my opinion the surface da zones shown on Overlay "A" support this conclusion.

2. The target settings could be made slightly wider to support the tactical training of law enforce thus enlarging the surface danger zone shown on Overlay "C". Any decisions on the potential ri associated with the surface danger zones must be weighed carefully against all available inform (e.g., planned usage of adjacent lands for recreational purposes).

3. An outdoor range facility of this type is desperately needed in the Portland-Vancouver metrop area. Every effort must be made to design and construct a range that meets established safety standards in order that it may be used to its fullest potential.

4. User fees should result in positive cash flow for Clark County and provide the necessary reve on-going range management and maintenance.

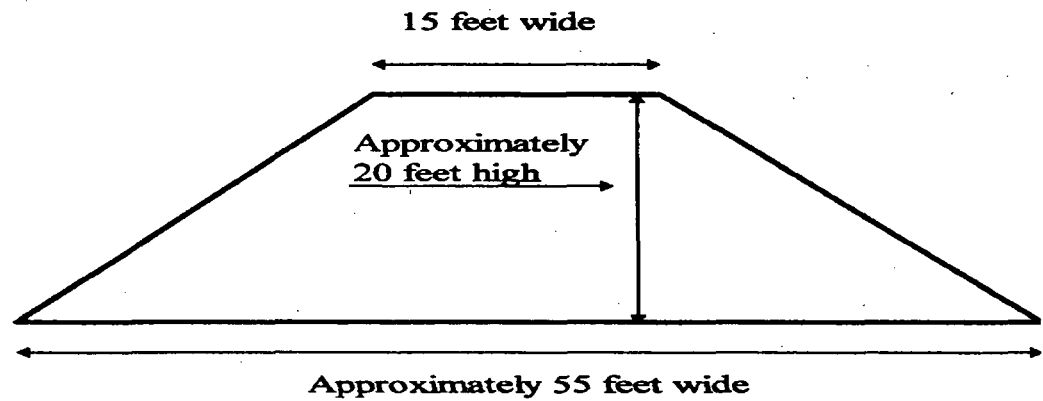
CAMP BONNEVILLE SAFETY FAN REPORT



Terrain Study Camp Bonneville Safety Fan Report

ATTACHMENT 1

CAMP BONNEVILLE SAFETY FAN REPORT



Approximate recommended dimension of the earth berms

ATTACHMENT 2

Appendix F

PRERERRED ALTERNATIVE

DRAFT SEQUENCING STRATEGY

CAMP BONNEVILLE REUSE ELEMENTS

CAMP BONNEVILLE, CLARK COUNTY, WA

updated February 18, 2003

Summary Table 1

Table S-1

Table S-2

Table S-3

Table S-4

Table S-5

Table S-0

Table S-6

Table S-2

Table S-6

Draft Sequencing Strategy - Preferred Alternative

Sequence #1 - Get Started

Sequence #2 - Starter Regional Park Development

Sequence #3 - Rustic Retreat/Outdoor School Development

Sequence #4 - Clark College/Law Enforcement Training Center Development

Sequence #5 - Pubic Firing Range Development

Sequence #0 - Make Decisions

Start up Site Infrastructure Capital Costs

Sequence #2 - Phase 1 Infrastructure

Sequence #6 - Open Space/Greenway Trails Development

Roads

Rustic Retreat Center

Regional Starter Park

Outdoor School

Detail Costs

Detail Costs

Detail Costs

Detail Costs

Summary Table 1

Draft Sequencing Strategy - Preferred Alternative

Camp Bonneville Reuse Plan

(data in 2003 dollar amounts)

Sequence/Action		Fixed Annual Operating Cost	Starter Reg. Park Annual Operating Cost	Timber Revenue	Programmatic Revenue	Annual Net Revenue Before Debt Service	Annual County Debt Service	Annual Net Revenue After Debt Service
Seq. 1	Get Started/Timber Mgmt.	\$ (212,500)		\$ 250,000	\$ -	\$ 37,500	\$ -	\$ 37,500
Seq. 2	"Starter" Regional Park*	" "	\$ (180,000)	" "	\$ 333,000	\$ 153,000	\$ (192,594)	\$ (39,594)
Seq. 3	Retreat/Outdoor School *	" "		" "	\$ 6,250	\$ 6,250	\$ -	\$ 6,250
Seq. 4	Clark College/L.E.T.C.	" "		" "	\$ -	\$ -	\$ -	\$ -
Build-out Position		\$ (212,500)	\$ (180,000)	\$ 250,000	\$ 339,250	\$ 196,750	\$ (192,594)	\$ 4,156

* Assumes 50% non-local grant funding.

Note: all numbers are subject to change and refinement.

Source: compiled by Otak, Inc. with input from Camp Bonneville Finance Subcommittee.

Table S-1

**Sequence #1 - Get Started
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Transfer Property
- 2 Maintain Property in Existing Condition
- 3 Obtain Zoning and Land Use Approvals
- 4 Conduct Necessary Studies and Engineering Plans
- 5 Initiate Timber Management

Action	Annual Operating Cost	Total Capital Cost	Net Annual Revenue	Notes
Maintain/Insure Property	\$ (150,000)			
LRA Staff Director	\$ (62,500)			Includes overhead and expenses
Plans and Specifications				To be determined
Timber Management			\$ 250,000	After operating expenses
Total	\$ (212,500)	\$ -	\$ 250,000	

Table S-2

Sequence #2 - Starter Regional Park Development
Camp Bonneville Sequencing Strategy

Objectives:

- 1 Continue Site Maintenance/Management
- 2 Develop Starter Regional Park

Action	Annual Operating Cost	Capital Cost	Capital Funding	Net Annual Revenue	Notes
Maintain/Insure Property	\$ (125,000)				
LRA Staff Director	\$ (62,500)				Includes overhead and expenses
Regional Park Infrastructure		\$ (593,938)	\$ 593,938	\$ (53,454)	Assumes 50% grant funded*
Regional Park Development		\$ (1,546,000)	\$ 1,546,000	\$ (139,140)	Assumes 50% grant funded*
Off Site Road Improvements					To be determined
Regional Park Operations	\$ (180,000)			\$ 333,000	See detailed Op./Rev. est.
Timber Management				\$ 250,000	
Total	\$ (367,500)	\$ (2,139,938)	\$ 2,139,938	\$ 390,406	

* Assumes 9.0% factor for annualizing capital cost. Total capital cost is twice the amount shown (incurred).

Table S-3

**Sequence #3 - Rustic Retreat/Outdoor School Development
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Continue Site Maintenance/Management
- 2 Develop Retreat/Outdoor School
- 3 Lease Retreat/Outdoor School Property

Action	Annual Operating Cost	Capital Cost	Capital Funding	Net Annual Revenue	Notes
Maintain/Insure Property	\$ (125,000)				
LRA Staff Director	\$ (62,500)				
Retreat/Outdoor School Infra.		\$ 123,813	\$ (123,813)		Includes overhead and expenses Cost paid by Leasee (not County)
Amphitheater Facility		\$ 125,000	\$ (112,500)		Assumes "one time" cost to County
Retreat/Outdoor School Facility		\$ (2,049,000)	\$ 2,049,000		Cost Paid by Leasee (not County)
Timber Management				\$ 250,000	
Amphitheater/Retreat/Outdoor School Lease				\$ 6,250	Preliminary Estimate
Total	\$ (187,500)	\$ (1,800,188)	\$ 1,812,688	\$ 256,250	

* Assumes 9.0% factor for annualizing capital cost. Total capital cost is twice the amount shown (incurred).

Table S-4

**Sequence #4 - Clark College/Law Enforcement Training Center Development
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Continue Site Maintenance/Management
- 2 Develop Clark College/Law Enforcement Training Center (LETC) Infrastructure
- 3 Lease Clark College/Law Enforcement Training Center (LETC) Property

Action	Annual Operating Cost	Total Capital Cost	Capital Funding	Net Annual Revenue	Notes
Maintain/Insure Property	\$ (125,000)				
LRA Staff Director	\$ (62,500)				
Site Infrastructure		\$ 123,813	\$ (123,813)		Includes overhead and expenses Cost paid by leasee (not County).
Timber Management				\$ 250,000	After Operating Expenses
Clark College/LETC Lease Revenue				\$ -	Preliminary Estimate
Total	\$ (187,500)	\$ 123,813	\$ (123,813)	\$ 250,000	

Table S-5

**Sequence #5 - Pubic Firing Range Development
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Continue Site Maintenance/Management
- 2 Develop Public Firing Range
- 3 Lease Public Firing Range Property

Action	Annual Operating Cost	Capital Cost	Capital Funding	Net Annual Revenue	Notes
Maintain/Insure Property	\$ (125,000)				
LRA Staff Director	\$ (62,500)				
Pubilc Firing Range		n/a	n/a		Includes overhead and expenses Cost Paid by leasee (not County)
Timber Management				\$ 250,000	
Public Firing Range Lease				\$ 6,250	Preliminary Estimate
Total	\$ (187,500)	\$ -	\$ -	\$ 256,250	

Table S-0

**Sequence #0 - Make Decisions
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Adopt Reuse Plan
- 2 Select Property Transfer Approach
- 3 Complete Environmental Analysis
- 4 Complete Ordinance/Site Mitigation

Table S-6

Start up Site Infrastructure Capital Costs
Camp Bonneville Master Plan
(data in 2003 dollar amounts)

Cost Element	Starter Regional Park	Rustic Retreat/ Outdoor School	Clark College/ L.E.T.C.	Total
Roads	\$ 998,000	\$ -	\$ -	\$ 998,000
Water	\$ 87,750	\$ 4,875	\$ 4,875	\$ 97,500
Septic Upgrade	\$ 58,250	\$ 116,500	\$ 116,500	\$ 291,250
Electric	\$ 43,875	\$ 2,438	\$ 2,438	\$ 48,750
Total	\$ 1,187,875	\$ 123,813	\$ 123,813	\$ 1,435,500

** Conceptual capital cost estimates shown. Actual allocation of capital costs by site user has not been determined. Costs do not include new water and sewer system connections.*

Table S-2

**Sequence #2 - Phase 1 Infrastructure
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Continue Site Maintenance/Management
- 2 Construct Sequence #2 Infrastructure
- 3 Transfer Clark College Property
- 4 Lease FBI Property
- 5 Provide Off-Site Improvements

Action	Annual Operating Cost	Total Capital Cost	Capital Funding	Annual Revenue	Notes
Caretaker Status				\$ -	Discontinued at this phase
Maintain/Insure Property	\$ (125,000)				
LRA Staff Director	\$ (62,500)				Includes overhead and expenses
Sequence #2 Site Infrastructure		\$ (424,000)	\$ 424,000	\$ (38,160)	Includes Unallocated Costs Only*
Timber Management				\$ 250,000	After operating expenses.
FBI Land Lease					To be determined
Total	\$ (187,500)	\$ (424,000)	\$ 424,000	\$ 211,840	

* assumes 9.0% factor for annualizing capital cost.

Table S-6

**Sequence #6 - Open Space/Greenway Trails Development
Camp Bonneville Sequencing Strategy**

Objectives:

- 1 Continue Site Maintenance/Management
- 2 Develop Open Space/Greenway Trails
- 3 Initiate Phase 2 Timber Management

Action	Annual Operating Cost	Total Capital Cost	Capital Funding	Annual Revenue	Notes
Maintain Property	\$ (125,000)				
LRA Staff Director	\$ (100,000)				Includes overhead and expenses
LRA Staff Support	\$ (50,000)				Includes overhead and expenses
Open Space/Greenway Trails	\$ (53,000)	\$ (152,000)	\$ 152,000	\$ 40,000	Assumes 50% grant funded.
Timber Management - Phase 1				\$ 125,000	After operating expenses.
Timber Management - Phase 2				\$ 100,000	After operating expenses.
Total	\$ (328,000)	\$ (152,000)		\$ 265,000	

CAMP BONNEVILLE

Reuse Plan

Clark County, Washington

ROADS

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 1 - GENERAL				
Temporary Construction Facilities	LS	6,250	1	6,250
Construction Utilities	LS	2,500	1	2,500
Construction Start-Up	LS	6,250	1	6,250
Bonds	LS	3,750	1	3,750
Permits	LS	2,500	1	2,500
Security	LS	2,500	1	2,500
Testing Services	LS	2,500	1	2,500
Systems Startup	LS	2,500	1	2,500
Contract Close-Out	LS	2,500	1	2,500
Subtotal				31,250
DIVISION 2 - SITEWORK				
Site Clearing	SY	1.25	5,500	6,875
Earthwork	CY	7.50	6,500	48,750
Rock Removal	LS	12,500	1	12,500
Soil Treatment	LS	3,125	1	3,125
Asphalt Road Paving - 24 feet wide	LF	82	2,000	164,000
Upgrade Culverts Under Road Crossing	EA	12,500	1	12,500
Roadside Landscaping/Erosion Control	LS	50,000	1	50,000
Pavement Repair Existing Paved Roads	LF	28	6,000	168,000
Range Road Upgrade (Gravel)	SF	25	7,000	175,000
Subtotal				640,750

Road to Rustic Expansion

Road to Rustic Expansion

Road to Rustic Expansion

Road to Rustic Expansion

Road to Rustic Expansion

Road to Rustic Expansion

Road to Rustic Expansion

Includes selective widening

ROADS				
CLARK COUNTY				
WASHINGTON				
DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 3 - CONCRETE				
NOT USED				
Subtotal				0
DIVISION 4 - MASONRY				
NOT USED				
Subtotal				0
DIVISION 5 - METALS				
NOT USED				
Subtotal				0
DIVISION 6 - WOOD AND PLASTICS				
NOT USED				
Subtotal				0
DIVISION 7 - THERMAL AND MOISTURE PROTECTION				
NOT USED				
Subtotal				0
DIVISION 8 - DOORS AND WINDOWS				
NOT USED				
Subtotal				0
DIVISION 9 - FINISHES				
NOT USED				
Subtotal				0

ROADS				
CLARK COUNTY				
WASHINGTON				
DESCRIPTION		UNIT PRICE	QUANTITY	TOTAL
DIVISION 10 - SPECIALTIES				
NOT USED				
Subtotal				0
DIVISION 11 - EQUIPMENT				
NOT USED				
Subtotal				0
DIVISION 12 - FURNISHINGS				
NOT USED				
Subtotal				0
DIVISION 13 - SPECIAL CONSTRUCTION				
NOT USED				
Subtotal				0
DIVISION 14 - CONVEYING SYSTEMS				
NOT USED				
Subtotal				0
DIVISION 15 - MECHANICAL				
NOT USED				
Subtotal				0

CLARK COUNTY
WASHINGTON

[illegible]

15%

20%

7.6%

CAMP BONNEVILLE

CLARK COUNTY, WASHINGTON

RUSTIC RETREAT CENTER @ CAMP BONNEVILLE CANTONMENT

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 1 - GENERAL				
Temporary Construction Facilities		3,750	1	3,750
Construction Utilities		6,250	1	6,250
Construction Startup				0
Bonds		12,500	1	12,500
Permits		9,375	1	9,375
Security		12,500	1	12,500
Testing Services				0
Systems Startup				0
Contract Closeout		12,500	1	12,500
				0
				0
				0
Subtotal				56,875
DIVISION 2 - SITEWORK				
Structure Demolition		18,750	1	18,750
Site Clearing				0
Earthwork				0
Rock Removal				0
Soil Treatment				0
Utility Installation				0
Bridges and Culverts				0
Paving and Curbs				0
Fencing				0
Landscaping				0
				0
				0
				0
Subtotal				18,750

Miscellaneous demolition

CAMP BONNEVILLE-RUSTIC RETREAT CENTER
CLARK COUNTY
WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 3 - CONCRETE				
Concrete Formwork				
Concrete Reinforcement				
Cast-In-Place Concrete				
Concrete Accessories				
Subtotal				0
DIVISION 4 - MASONRY				
Masonry Accessories				
Veneer Masonry System				
Reinforced Unit Masonry System				
Rough Stone				
Subtotal				0
DIVISION 5 - METALS				
Structural Steel				0
Steel Joist				0
Steel Decking				0
Cold Formed Metal Framing				0
Metal Fabrications				0
Handrails and Railings		31,250	1	31,250
Gratings and Floor Plates				0
				0
				0
				0
Subtotal				31,250

ADA entire site

CAMP BONNEVILLE-RUSTIC RETREAT CENTER				
CLARK COUNTY				
WASHINGTON				
DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 6 - WOOD AND PLASTICS				
Framing and Sheathing		125,000	1	125,000
Heavy Timber Construction				0
Glue Laminated Structure				0
Wood Trusses				0
Plywood Web Joist				0
Finish Carpentry				0
Custom Casework				0
Wood Paneling				0
				0
				0
				0
				0
Subtotal				125,000
DIVISION 7 - THERMAL AND MOISTURE PROTECTION				
Waterproofing				0
Insulation		50,000	1	50,000
Fireproofing				0
Roofing		87,500	1	87,500
Siding		16,250	1	16,250
Flashing and Sheet Metal				0
Gutters and Downspouts		8,125	1	8,125
Roof Accessories				0
Skylights				0
Sealants				0
				0
				0
				0
				0
				0
				0
Subtotal				161,875

Misc. structural repairs, mainly floors

Primarily wall insulation

Roof 50% of buildings

Selective repairs of shakes.

New on all buildings.

CAMP BONNEVILLE-RUSTIC RETREAT CENTER
CLARK COUNTY
WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 8 - DOORS AND WINDOWS				
Metal Doors and Frames				0
Wood Doors and Frames				0
Door Opening Assemblies				0
Section Overhead Doors				0
Entrances and Storefronts				0
Metal Windows				0
Wood and Plastic Windows		65,000	1	65,000
Hardware		25,000	1	25,000
Glazing				0
Mirrors				0
Glazed Curtain Walls				0
				0
				0
				0
				0
Subtotal				90,000
DIVISION 9 - FINISHES				
Gypsum Wallboard		81,250	1	81,250
Floor and Wall Tile				0
Acoustical Treatment				0
Wood Flooring				0
Stone and Brick Flooring				0
Resilient Flooring				0
Carpeting				0
Painting		32,500	1	32,500
Wall Covering				0
				0
				0
				0
				0
				0
Subtotal				113,750

Replace wood windows w/ins units.

Exit hardware.

Replace T-111

CAMP BONNEVILLE-RUSTIC RETREAT CENTER**CLARK COUNTY**

WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 10 - SPECIALTIES				
Chalkboards and Tackboards				0
Visual Display Boards				0
Toilet Compartments				0
Louvers and Vents				0
Wall and Corner Guards				0
Pest Control				0
Fireplaces and Stoves				0
Flagpoles				0
Identifying Devices				0
Lockers				0
Fire Extinguishers and Accessories				0
Mail Boxes				0
Partitions				0
Storage Shelving				0
Telephone Enclosures				0
Toilet and Bath Accessories				0
				0
Subtotal				0
DIVISION 11 - EQUIPMENT				
Maintenance Equipment				0
Parking Control Equipment				0
Food Service Equipment				0
Telecommunication Equipment				0
				0
Subtotal				0
DIVISION 12 - FURNISHINGS				
Manufactured Cabinets and Casework				0
Window Treatment				0
Furniture and Accessories				0
Rugs and Mats				0
				0
Subtotal				0

CAMP BONNEVILLE-RUSTIC RETREAT CENTER
CLARK COUNTY
WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 13 - SPECIAL CONSTRUCTION				
Cold Storage Room				0
Saunas				0
Pools				0
Liquid and Gas Storage Tanks				0
Digestion Tank Covers and Appurtenance				0
Utility Control System				0
Multipurpose Bldg	SF	125	5,000	625,000
				0
				0
Subtotal				625,000
DIVISION 14 - CONVEYING SYSTEMS				
Lifts				0
Material Handling Systems				0
				0
				0
Subtotal				0
DIVISION 15 - MECHANICAL				
Insulation				0
Plumbing Systems		25,000		25,000
Plumbing Fixtures and Trim		7,500	1	7,500
Fire Protection		62,500		62,500
Heating System		43,750	1	43,750
Refrigeration				0
Air Distribution				0
Controls and Instrumentation				0
				0
				0
				0
				0
				0
Subtotal				138,750

Selectively replace obsolete water lines
 Fixture replacement/latrine
 Add hydrants and lines to well.
 Unit ventilators in each building

Assumes sanitary retrofit by Army

CAMP BONNEVILLE-RUSTIC RETREAT CENTER				
CLARK COUNTY				
WASHINGTON				
DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 16 - ELECTRICAL				
Service and Distribution		18,750	1	18,750
Conduit				0
Wiring				0
Lighting		12,500		0
Wiring Accessories				0
Cabinets and Enclosures				0
Communications				0
Controls and Instrumentations				0
				0
				0
				0
				0
Subtotal				18,750
SUMMARY				
DIVISION 1 - General				56,875
DIVISION 2 - Sitework				18,750
DIVISION 3 - Concrete				0
DIVISION 4 - Masonary				0
DIVISION 5 - Metals				31,250
DIVISION 6 - Wood and Plastics				125,000
DIVISION 7 - Thermal and Moisture Protection				161,875
DIVISION 8 - Doors and Windows				90,000
DIVISION 9 - Finishes				113,750
DIVISION 10 - Specialties				0
DIVISION 11 - Equipment				0
DIVISION 12 - Furnishings				0
DIVISION 13 - Special Construction				625,000
DIVISION 14 - Conveying Systems				0
DIVISION 15 - Mechanical				138,750
DIVISION 16 - Electrical				18,750
Subtotal				1,380,000
Contractor OH&P				207,000
Subtotal				1,587,000
Contingency				317,400
Subtotal				1,904,400
Washington State Sales Tax				144,734
Total				2,049,134

Misc. repairs

Misc. upgrades

15%

20%

7.6%

CAMP BONNEVILLE

CLARK COUNTY, WASHINGTON

REGIONAL PARK (STARTER)

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 1 - GENERAL				
Temporary Construction Facilities	LS	5,000	1	5,000
Construction Utilities	LS	2,500	1	2,500
Construction Startup	LS	6,250	1	6,250
Bonds	LS	6,250	1	6,250
Permits	LS	6,250	1	10,600
Security	LS	3,750	1	3,750
Testing Services	LS	2,500	1	2,500
Systems Start-Up	LS	2,500	1	2,500
Contract Close-Out	LS	2,500	1	2,500
Professional fees	LS	187,500	1	187,500
Subtotal				229,350
DIVISION 2 - SITEWORK				
Structure Demolition	LS	2,500	1	2,500
Site Clearing	LS	25,000.00	1	25,000
Earthwork	CY	7.50	20,000	150,000
Rock Removal	LS	6,250.00	1	6,250
Soil Treatment	LS	6,250.00	1	6,250
Utility Installation	LS	25,000.00	1	25,000
Foot Bridges Across Lacamas Creek	EA	18,750.00	3	56,250
Road Paving	LF			0
Fencing	LF	12.50	100	1,250
Asphalt Paved Parking Spaces	EA	1,565.00	150	234,750
Landscaping (trees, shrubs & grass)	LS	37,500.00	1	37,500
Landscape Irrigation	SF	0.50	30,000	190,000
Subtotal				734,750

Refer to Roads Cost Estimate

REGIONAL PARK (STARTER)

CLARK COUNTY

WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 3 - CONCRETE				
				0
				0
				0
				0
Subtotal				0
DIVISION 4 - MASONRY				
				0
				0
				0
				0
Subtotal				0
DIVISION 5 - METALS				
				0
				0
				0
				0
				0
				0
				0
Subtotal				0

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

REGIONAL PARK (STARTER)				
CLARK COUNTY				
WASHINGTON				
DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 6 - WOOD AND PLASTICS				
				0
				0
				- 0
				- 0
				0
				0
				0
				0
Subtotal				0
DIVISION 7 - THERMAL AND MOISTURE PROTECTION				
				- 0
				0
				0
				- 0
				0
				0
				0
				0
				0
Subtotal				0

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

WASHINGTON

Included within lump sum costs for the restroom buildings, fee collection booth, and park watchperson's residences as shown under Division 13 - Special Construction.

REGIONAL PARK (STARTER)				
CLARK COUNTY				
WASHINGTON				
DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 13 - SPECIAL CONSTRUCTION				
Large Restroom Buildings w/showers	EA	375,000	1	375,000
Small Restroom Buildings	EA	250,000	0	0
Large Group Picnic Shelter Buildings	EA	150,000	2	300,000
Small Group Picnic Shelter Buildings	EA	125,000	0	0
Park Watchperson's Residence	EA	50,000	1	50,000
Fee Collection Booth	EA	50,000	1	50,000
Amphitheater & Stage	EA	125,000	0	0
Picnic Tables	EA	3,125	60	187,500
Hiking & Equestrian Trails	LF	5	0	0
Information & Regulatory Signs	LS	12,500	1	12,500
Parking Control Equipment (Gates & B	LS	12,500	1	12,500
RV Camping Sites	EA	2,500	50	125,000
Subtotal				1,112,500
DIVISION 14 - CONVEYING SYSTEMS				
Lifts				0
Material Handling Systems				0
Subtotal				0
DIVISION 15 - MECHANICAL				
				0
				0
				0
				0
				0
				0
				0
				0
				0
Subtotal				0

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

REGIONAL PARK (STARTER)**CLARK COUNTY**

WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 16 - ELECTRICAL				
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
Subtotal				0
SUMMARY				
DIVISION 1 - General				229,350
DIVISION 2 - Sitework				734,750
DIVISION 3 - Concrete				0
DIVISION 4 - Masonary				0
DIVISION 5 - Metals				0
DIVISION 6 - Wood and Plastics				0
DIVISION 7 - Thermal and Moisture Protection				0
DIVISION 8 - Doors and Windows				0
DIVISION 9 - Finishes				0
DIVISION 10 - Specialties				0
DIVISION 11 - Equipment				6,250
DIVISION 12 - Furnishings				0
DIVISION 13 - Special Construction				1,112,500
DIVISION 14 - Conveying Systems				0
DIVISION 15 - Mechanical				0
DIVISION 16 - Electrical				0
Subtotal				2,082,850
Contractor OH&P				312,428
Subtotal				2,395,278
Contingency				479,056
Subtotal				2,874,333
Washington State Sales Tax				218,449
Total				3,092,782

Included within lump sum costs
for the restroom buildings, fee
collection booth, and park
watchperson's residences
as shown under
Division 13 - Special Construction.

15%

20%

7.6%

CAMP BONNEVILLE

Reuse Plan

Clark County Washington

MIN COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 1 - GENERAL				
Temporary Construction Facilities		3,750	1	3,750
Construction Utilities		6,250	1	6,250
Construction Startup				0
Bonds		12,500	1	12,500
Permits		9,375	1	9,375
Security		12,500	1	12,500
Testing Services				0
Systems Startup				0
Contract Closeout		12,500	1	12,500
				0
				0
				0
Subtotal				56,875
DIVISION 2 - SITEWORK				
Structure Demolition				0
Site Clearing				0
Earthwork				0
Rock Removal				0
Soil Treatment				0
Utility Installation				0
Bridges and Culverts				0
Paving and Curbs				0
Fencing				0
Landscaping				0
				0
				0
				0
Subtotal				0

MINIMUM COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT
CLARK COUNTY
WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 3 - CONCRETE				
Concrete Formwork				
Concrete Reinforcement				
Cast-In-Place Concrete				
Concrete Accessories				
Subtotal				0
DIVISION 4 - MASONRY				
Masonry Accessories				
Veneer Masonry System				
Reinforced Unit Masonry System				
Rough Stone				
Subtotal				0
DIVISION 5 - METALS				
Structural Steel				0
Steel Joist				0
Steel Decking				0
Cold Formed Metal Framing				0
Metal Fabrications				0
Handrails and Railings		31,250	1	31,250
Gratings and Floor Plates				0
				0
				0
				0
Subtotal				31,250

ADA entire site

MINIMUM COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT

CLARK COUNTY

WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 6 - WOOD AND PLASTICS				
Framing and Sheathing		125,000	1	125,000
Heavy Timber Construction				0
Glue Laminated Structure				0
Wood Trusses				0
Plywood Web Joist				0
Finish Carpentry				0
Custom Casework				0
Wood Paneling				0
				0
				0
				0
				0
Subtotal				125,000
DIVISION 7 - THERMAL AND MOISTURE PROTECTION				
Waterproofing				0
Insulation				0
Fireproofing				0
Roofing		87,500	1	87,500
Siding		16,250	1	16,250
Flashing and Sheet Metal				0
Gutters and Downspouts		8,125	1	8,125
Roof Accessories				0
Skylights				0
Sealants				0
				0
				0
				0
				0
				0
				0
Subtotal				111,875

Misc. structural repairs, mainl

Roof 50% of buildings

Selective repairs of shakes.

New on all buildings.

MINIMUM COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT
CLARK COUNTY
WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 8 - DOORS AND WINDOWS				
Metal Doors and Frames				0
Wood Doors and Frames				0
Door Opening Assemblies				0
Section Overhead Doors				0
Entrances and Storefronts				0
Metal Windows				0
Wood and Plastic Windows				0
Hardware		25,000	1	25,000
Glazing				0
Mirrors				0
Glazed Curtain Walls				0
				0
				0
				0
				0
Subtotal				25,000
DIVISION 9 - FINISHES				
Gypsum Wallboard		81,250	1	81,250
Floor and Wall Tile				0
Acoustical Treatment				0
Wood Flooring				0
Stone and Brick Flooring				0
Resilient Flooring				0
Carpeting				0
Painting		32,500	1	32,500
Wall Covering				0
				0
				0
				0
				0
				0
Subtotal				113,750

Exit hardware.

Replace T-111 interior panelin

MINIMUM COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT**CLARK COUNTY**

WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 10 - SPECIALTIES				
Chalkboards and Tackboards				0
Visual Display Boards				0
Toilet Compartments				0
Louvers and Vents				0
Wall and Corner Guards				0
Pest Control				0
Fireplaces and Stoves				0
Flagpoles				0
Identifying Devices				0
Lockers				0
Fire Extinguishers and Accessories				0
Mail Boxes				0
Partitions				0
Storage Shelving				0
Telephone Enclosures				0
Toilet and Bath Accessories				0
				0
Subtotal				0
DIVISION 11 - EQUIPMENT				
Maintenance Equipment				0
Parking Control Equipment				0
Food Service Equipment				0
Telecommunication Equipment				0
				0
Subtotal				0
DIVISION 12 - FURNISHINGS				
Manufactured Cabinets and Casework				0
Window Treatment				0
Furniture and Accessories				0
Rugs and Mats				0
				0
Subtotal				0

MINIMUM COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT

CLARK COUNTY

WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 13 - SPECIAL CONSTRUCTION				
Cold Storage Room				0
Saunas				0
Pools				0
Liquid and Gas Storage Tanks				0
Digestion Tank Covers and Appurtenance				0
Utility Control System				0
				0
				0
				0
Subtotal				0
DIVISION 14 - CONVEYING SYSTEMS				
Lifts				0
Material Handling Systems				0
				0
				0
Subtotal				0
DIVISION 15 - MECHANICAL				
Insulation				0
Plumbing Systems		25,000		25,000
Plumbing Fixtures and Trim		7,500	1	7,500
Fire Protection		62,500		62,500
Heating System		43,750	1	43,750
Refrigeration				0
Air Distribution				0
Controls and Instrumentation				0
				0
				0
				0
				0
				0
Subtotal				138,750

Selectively replace obsolete w
Fixture replacement/latrine
Add hydrants and l ines to we
Unit ventilators in each buildi

Assumes sanitary retrofit by A

MINIMUM COSTS FOR OUTDOOR SCHOOL @ CAMP BONNEVILLE CANTONMENT
CLARK COUNTY
WASHINGTON

DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
DIVISION 16 - ELECTRICAL				
Service and Distribution		18,750	1	18,750
Conduit				0
Wiring				0
Lighting		12,500		12,500
Wiring Accessories				0
Cabinets and Enclosures				0
Communications				0
Controls and Instrumentations				0
				0
				0
				0
				0
Subtotal				31,250
SUMMARY				
DIVISION 1 - General				56,875
DIVISION 2 - Sitework				0
DIVISION 3 - Concrete				0
DIVISION 4 - Masonary				0
DIVISION 5 - Metals				31,250
DIVISION 6 - Wood and Plastics				125,000
DIVISION 7 - Thermal and Moisture Protection				111,875
DIVISION 8 - Doors and Windows				25,000
DIVISION 9 - Finishes				113,750
DIVISION 10 - Specialties				0
DIVISION 11 - Equipment				0
DIVISION 12 - Furnishings				0
DIVISION 13 - Special Construction				0
DIVISION 14 - Conveying Systems				0
DIVISION 15 - Mechanical				138,750
DIVISION 16 - Electrical				31,250
Subtotal				633,750
Contractor OH&P				95,063
Subtotal				728,813
Contingency				145,763
Subtotal				874,575
Washington State Sales Tax				66,468
Total				941,043

Misc. repairs

Misc. upgrades

15%

20%

7.6%

Appendix G

LAW ENFORCEMENT TRAINING CENTER HISTORY

The Law Enforcement Training Center (LETC) was originally conceived as a regional facility to serve the training needs for southern Washington and the northern Oregon with special emphasis on law enforcement agencies in Clark County and the City of Portland. The regional concept was eliminated at the Reuse Planning Committee level because of concerns about the magnitude of firing range activities, potential increases in traffic and the emphasis on regional rather than local benefits. The emergency vehicle operation course (EVOC) was also eliminated as part of this change due to concerns about noise and traffic generation. Elimination of the EVOC reduced the income potential of the LETC.

LETC representatives entered into discussions with Clark Community College as a potential partner in a project of reduced scope which appears in the final Draft Reuse Plan. Under this scenario Clark College would construct a three-six classroom facility for both environmental and law enforcement education programs. This possible partnership is expected to be beneficial by sharing costs between law enforcement agencies and Clark College. If rezoning for the new facility is not approved, law enforcement agencies will renovate up to six buildings in the Camp Killpack cantonment. (Clark College is not interested at this time in this option.)

In making the decision to reduce the scope of the LETC, the RPC and Clark County board of commissioners acknowledged that training that would be provided through a local/regional LETC is critically needed and has the potential to provide significant revenue toward its own operation.

The following drawings represent the regional LETC:

Typical Classroom Elevations -- Alternative 1

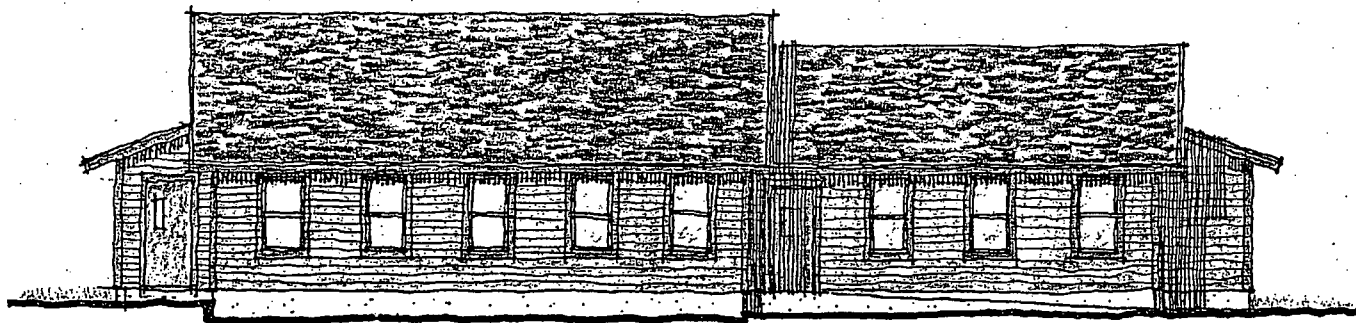
Typical Classroom Floor Plan -- Alternate 1

Typical Housing Floorplan -- Alternative 1

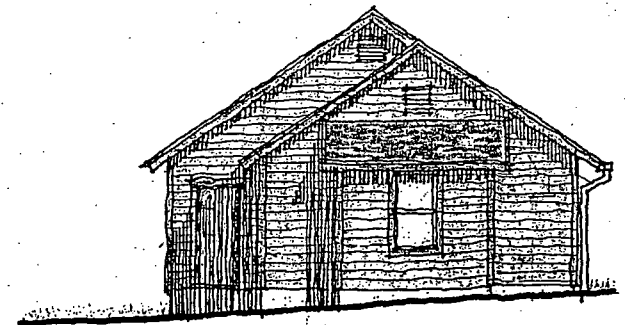
Site Plan -- Law Enforcement Firing Ranges

Preliminary Site Plan -- Camp Killpack

Additional LETC Information



SIDE ELEVATION



FRONT ELEVATION

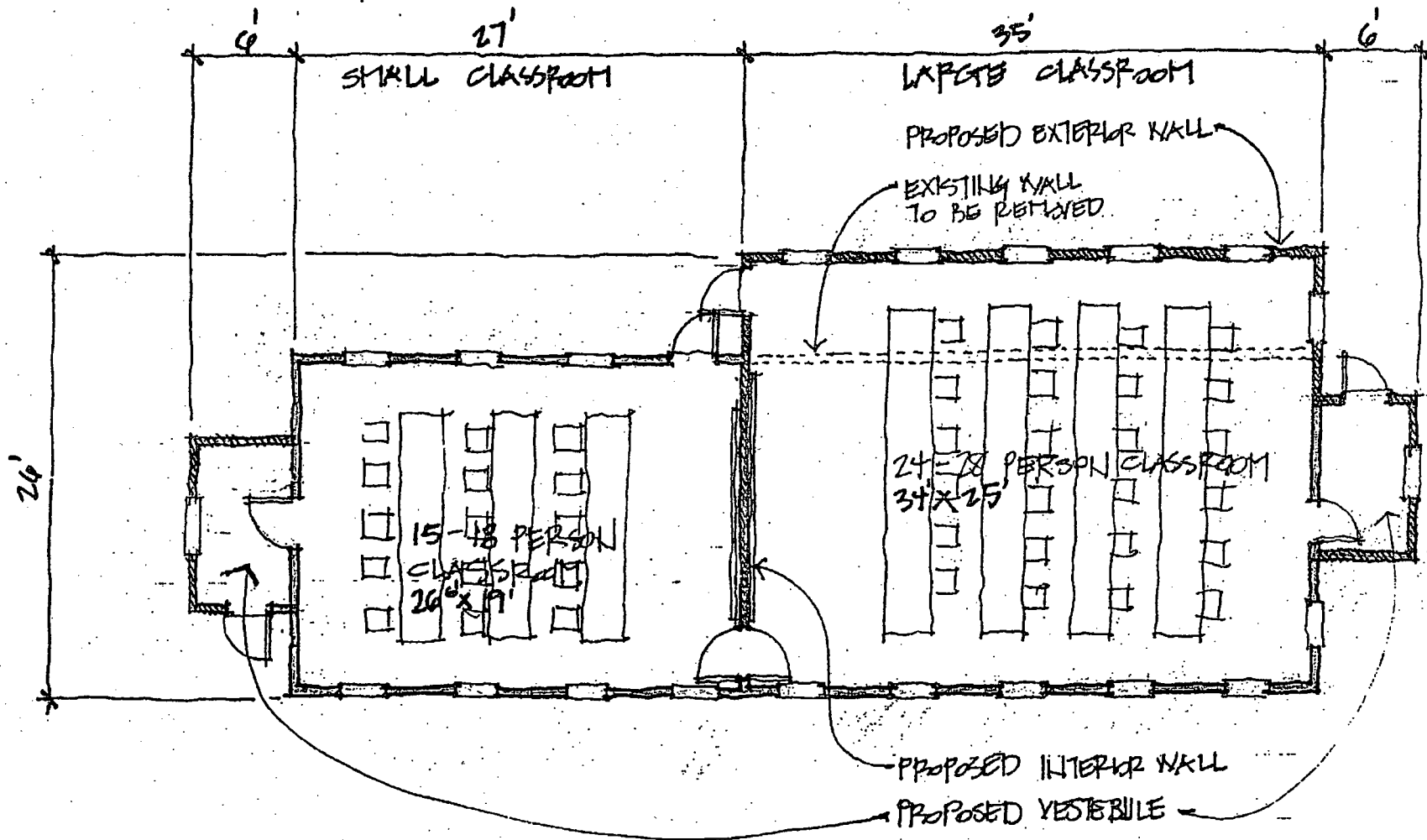
TYPICAL CLASSROOM ELEVATIONS - ALTERNATE I

SCALE: 1/8" = 1'-0"

OTAK ARCH

10.7.1997





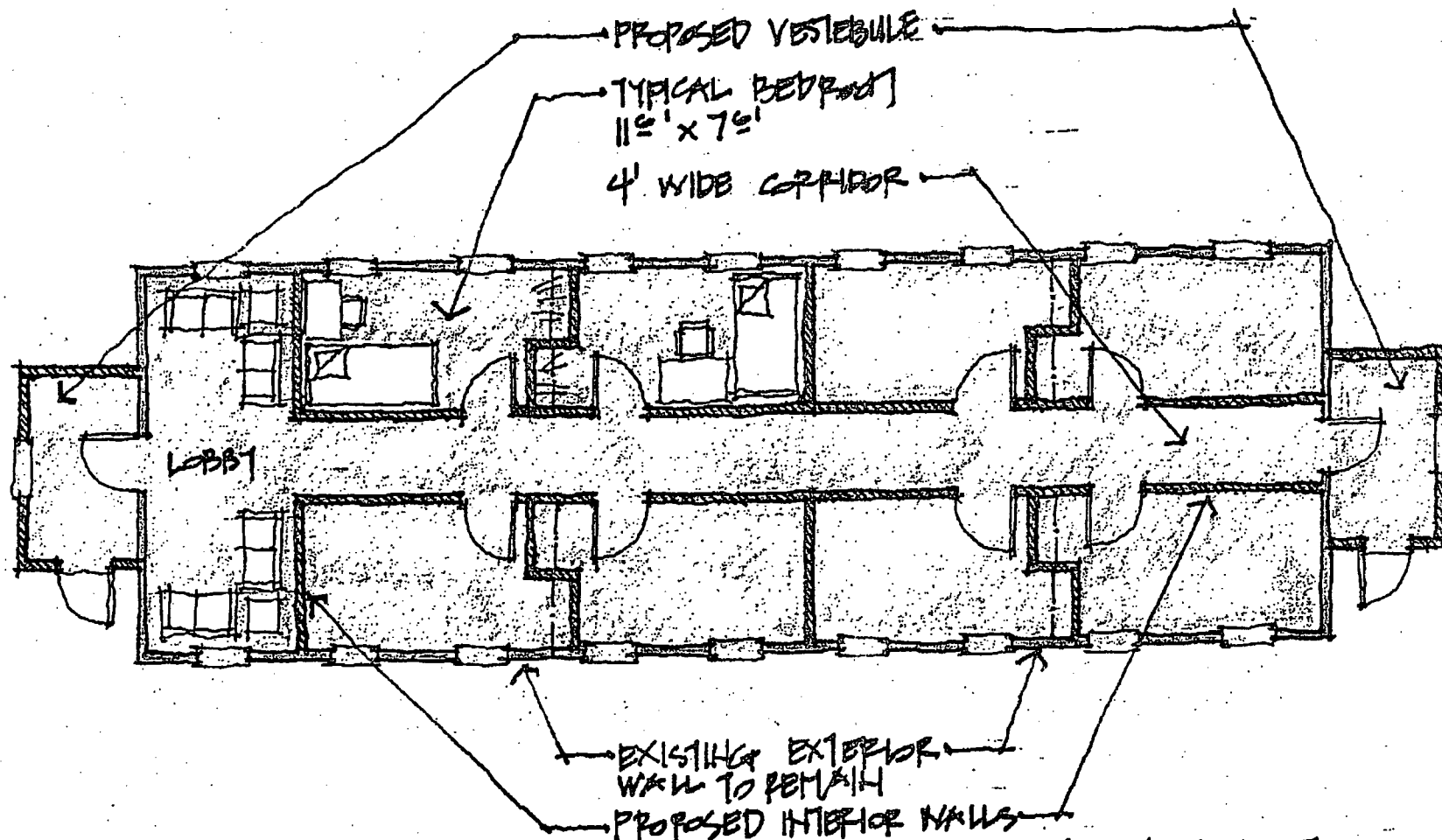
TYPICAL CLASSROOM FLOOR PLAN - ALTERNATE I

SCALE: $1/8" = 1'-0"$

OTAK ARCH

10-7-1997





TYPICAL HOUSING FLOOR PLAN - ALTERNATIVE I

SCALE: 1/8" = 1'-0"

OTAK ARCH

10.7.1997



TO CAMP BALLEWILLE

PUBLIC HANDGUN RANGE
2510 x 3310

PUBLIC RIFLE RANGE
3310 x 20010

PUBLIC PARKING

FENCE & GATE

18 DEEP PARKING
TYPICAL

100' WIDE SAFETY BUFFER
TYPICAL @ ALL RANGES

20' WIDE PAVED
ROAD

CONCRETE
FESTFOOT - 5 TOTAL

HIGH FENCE
TYPICAL

FLOOD LIGHTS
TYPICAL

CLEANING SHED
5 TOTAL

FBI BUILDINGS
& PATRIOT

RIFLE RANGE
3310 x 20010
(EXISTING RANGE #6)

HANDGUN RANGE - 4 TOTAL
2510 x 3310

LIMIT OF EXISTING
VEGETATION - TYPICAL

80" x 15" BERM
@ ALL RANGES

STATIONARY TARGET
HANDGUN RANGE
2510 x 10010
(EXISTING RANGE #7)

FBI HANDGUN RANGE
5010 x 6510

SHOOTING HOUSE
2510 x 2510

8' HIGH CHAIN LINK
FENCE @ 3 SIDES

SOUTH ENTRANCE

SITE PLAN - LAW ENFORCEMENT FIRING RANGES REGIONAL TRAINING CENTER

SCALE: 1" = 50' (APPROXIMATE)
OTAK ARCHITECTS 9/12/1997
REVISED 9/18/1997

0 25 50 100 YARDS

NORTH





OFFICE OF THE SHERIFF

Law Enforcement Training Center

Camp Bonneville Alternative Reuse Plan

Profile

The proposed Law Enforcement Training Center at Camp Bonneville is a facility where police officers will receive basic training, learn new skills, and practice driving and firearms techniques. Training facilities include an emergency vehicle operation course (EVOC) and shooting ranges for rifle and handguns.

The attached alternative training center plan envelopes approximately 110 acres in the southern portion of Camp Bonneville. Earlier plans to utilize a portion of Camp Killpack have been re-evaluated. This plan calls for the placement of module buildings in the proposed paint ball area or co-locating with Clark College for classrooms and administrative space. Recommendations include relocating the EVOC course to the southern corridor of Camp Bonneville. EVOC will encompass the proposed firing range area.

The training center would operate year-round and serve law enforcement agencies from the Southwest Washington region. Firing range use will be limited to six months a year with no shooting on weekends. The ranges will have safety and noise baffling allowing unrestricted access of the park. Future plans include construction of an indoor range.

The attached drawing shows the proposed location for the training center, ranges and emergency vehicle operation course. The EVOC course as drawn is not to scale and the track configuration is for demonstrative purposes only. Obstacle courses for K-9, physical fitness training and mock training areas will be located within the EVOC course.

The training center will be available for use by any public service or community group. Rental and lease revenues will be used to cover operating costs and future development.

Organization of a neighborhood advisory panel is recommended to mutually address and resolve potential problems.

Law Enforcement Training Center - Alternative Plan

- Southwest Washington Law Enforcement Agencies -

- Summary Outline

Alternative Plan	
Stakeholders	Southwest Washington Agencies
Handgun Ranges	<p>1 Range with Safety and Noise Baffling - Operational from October through March.</p> <p>No weekend shooting; 0830-2030 hours Monday-Friday.</p> <p>1 Outdoor range - Possible future development.</p> <p>1 Indoor range site - Possible future development.</p> <p>1 Shooting house - Possible future development (Baffling)</p> <p>No seasonal restriction on use of simunition.</p>
Rifle Ranges	<p>1 Rifle Range - Safety and Noise Baffling - Operational from October through March.</p> <p>No weekend shooting; 0830-2030 hours Monday-Friday.</p>
Classrooms (Options)	<p>A.) Locate module buildings in paint ball area.</p> <p>Land request: 10 Acres.</p> <p>Modules can be replaced by permanent structures in future.</p> <p>Utilize Camp Killpack latrine/shower facility if necessary.</p> <p>B.) Incorporate classrooms into Clark College building at south end of Camp Bonneville.</p>
EVOC (Options)	<p>EVOC around range area.</p> <p>Utilize South Entrance</p> <p>Range use prohibited during EVOC.</p> <p>12 month operation; Monday-Friday only; 0830-2030 hours.</p> <p>Skid cars Prohibited</p>
Miscellaneous	Interior of EVOC track.
Est. Acreage	EVOC Around Ranges Approximately 100 acres.
Proposed Phase Development	<p>1.) Classrooms and Administrative Offices</p> <p>2.) Range(s)</p> <p>3.) EVOC</p> <p>4.) Mock City (Interior of EVOC Course)</p> <p>5.) Miscellaneous</p> <p>6.) Indoor Range</p>

Questions and Answers

Training Center Questions

Q Why do we need a training center?

Training, continuing education, and skill development are essential for maintaining effective law enforcement personnel and services. Additionally, state and federal training requirements must be met. Current training facilities are inadequate, located in different areas of the region, or are nonexistent. Creating a training center expands training opportunities, reduces redundancy, and improves operational efficiencies.

Q Why is the training center regional rather than local?

Local police agencies cannot afford to support a training center by themselves. By pooling resources with other agencies in the region, the training center can be developed and the cost to each agency and its taxpayers minimized.

Q How will the training center be funded?

Developing a training center may take several years. The pace of development is typically governed by the financial abilities of the participating agencies. However, in this case, federal funding is being sought and cost saving measures and possible partnerships are being explored. No funds will be diverted from hiring new deputies or officers. Fees generated from the training center will be used to cover operating costs and future development.

Q How many acres of land would the training center require?

If a classroom facility is built independent of Clark College, ten acres would be requested in the area previously identified for paint ball. Module buildings would be erected with plans to construct a permanent structure at the same location in the future.

The firing ranges and EVOC track would require approximately ninety to 100 acres. This would include the land necessary for impact safety zone.

In total the center would require approximately 110 acres.

Q What is the center's impact on traffic and congestion?

Use of the training center will create additional traffic on local roads. A review by the Clark County Public Works Department identified road improvements necessary to ensure safety. These improvements also create adequate road capacity.

Q Will the training center be used by other agencies?

The training center may be used by any public safety entity or community group. All users will be governed by safety and noise mandates. Fees generated by outside agency or community use will be utilized to support the operating and development costs of the center.

Q How often will training occur?

Training will be conducted throughout the year. However, firearms training will be restricted to October through March and prohibited on weekends; with the exception of simunition training. EVOC training would occur throughout the year.

Q How many officers would be present at any time?

If the training facility focus is limited to Southwest Washington, the maximum number of officers training at one time would be approximately 80. Officers would be involved in various training disciplines. If basic academies are realized, the maximum number of officers present, for in-service and academy training, would be about 110. Staff would be about 10.

Q What other activities will take place at the site?

Law enforcement training covers a variety of disciplines. Examples include:

Defensive Tactics	Proficiency Training	Legal Updates
Community Oriented Policing	K-9	Search & Rescue
Equestrian	Motorcycle	Bicycle
Citizen Academies	Special Tactics	Fire Service
Basic Academies	Recruiting	Private Security Training
Corrections Training	Reserve Academy	Higher education

Q Will the Sheriff's Office address neighbor concerns that arise after the training center is built?

The Sheriff's Office and other agencies interested in the development of a training center want to be good neighbors at Camp Bonneville. Creation of a neighborhood advisory panel is encouraged by the Sheriff's Office. Regularly scheduled meetings would be an avenue where problems could be identified and addressed.

Q Would officers at the training center respond to complaints in the park?

If serious situations involving threat to safety or property are observed in the park area, officers will respond from the center. However, patrol personnel would be summoned to respond to routine or minor complaints. Officers, when present at the training center, could also be dispatched to serious incidents in the general region if a patrol response was delayed. The Sheriff's Office would also like to locate a small patrol office at Camp Bonneville where district officers may write reports, make telephone calls and conduct other office related business.

Q What are the "partnerships" being discussed for the training center?

The local law enforcement community is very interested in collaborating with colleges, universities, corporations and community groups to provide education and training opportunities. For example, partnerships with Clark College is an opportunity for the College to collaborate, not only in education opportunities, but also on infrastructure and facilities development. Private industry security training will be provided as well as educational

opportunities for the community such as Citizens' Academies, volunteer coordination and Community Oriented Policing training. Partnerships also strengthen opportunities in procuring federal and state grants.

Firing Ranges

Q How loud are the firing ranges?

Noise level testing at the South gate of Camp Bonneville was conducted with the following results.

June 18th, 1997	South Gate		Feb. 17th, 1998	South Gate
Sound Source	Decibel Reading		Sound Source	Decibel Reading
9mm Handgun	47-54		9mm Handgun	49.4-51.2 (Breeze)
223 Rifle	47.1 -50.4		233 Rifle	No Test Conducted
Birds	41-43		9mm Handgun	46.3-48.6 (No Breeze)
Dog Barking	50-66		Jet Plane	71.3
Children	45-53		Jet Plane	60.6
Airplane	45-53			

Q How is the noise from shooting ranges controlled?

Outdoor and indoor sound levels at residential areas nearest the shooting ranges are currently below state and local limits. Measures to further reduce/limit sound include restricting range activities from April through September and construction of sound baffling. Sound engineers¹ estimate noise can be reduced by 10-15 dbL with sound baffling. Shooting will also be prohibited on weekends. The use of "simunition" is proposed throughout the year without limitation.

Q What is simunition?

Simunition is ammunition fired from a conventional handgun which has been fitted with a special barrel insert. The projectile which is fired is a plastic capsule filled with a biodegradable pink paint (soap). The projectile is fired by means of a low charged primer and creates a sound equivalent to a cap gun. The sound is so minimal that hearing protection is not required for the shooter. There are no immediate safety concerns. Simunition may 'sting' a person if struck at close range. This type of ammunition is used to assist officers with tactical firearms training. It does not replace training required with actual ammunition. Simunition is very expensive.

Q What safety measures will the ranges have?

Range safety devices are designed to eliminate the possibility of an errant bullet leaving the range. Ranges will be equipped with safety baffling reinforced with earthen berms. Fencing will also surround the facility.

Q Would an indoor range eliminate all outdoor range use?

Officers must be subjected to a variety of environmental conditions during firearms training. Indoor ranges cannot duplicate outdoor weather conditions and therefore are not a substitute for outdoor training. Indoor ranges also limit the type of training scenarios which can be conducted. However, an indoor range may reduce the amount of outdoor firearms training.

Q Will there be public ranges?

Though a good revenue source, the decision to incorporate public ranges at Camp Bonneville rests with the Board of County Commissioners. Approval or elimination of public ranges will not impact the training center. It is recommended, if approved, public ranges have the same safeguards and hours of operation as proposed by the training center.

1 VGO, Inc. Mr. Jon Van Gulick, P.E.

Jail Concerns

Q Will a jail be built at Camp Bonneville?

No. Clark County recently sighted and purchased land for a jail work center along Lower River Road west of Vancouver. New high-security facilities will be located with the current jail, west of the courthouse in downtown Vancouver.

Q Will prisoners be used to work at Camp Bonneville?

It is proposed that "trustees," low risk offenders, be utilized to perform maintenance tasks at Camp Bonneville. Trustees will be supervised and must adhere to strict rules or risk loss of trustee status.

Q Will sex offenders be used as trustees at Camp Bonneville ?

No. Sex offenders are not allowed to work outside the jail as trustees and therefore will not work at Camp Bonneville.

Emergency Vehicle Operation Course (EVOC)

Q What are the noise levels from the emergency vehicle track?

Decibel levels recorded at the Washington State Patrol EVOC track in Shelton,

Washington were as follows ...

Readings 57 Feet From Center Line Ambient Noise Level 46.3 db1		
Speed	Low Reading	High Reading
40 MPH	60.3	69.8
60 MPH	68.6	74.3
65 MPH	69.8	75.6
80 MPH	72.4	77.9

Readings From 1/10 Mile North of a Curve Ambient Noise Level 51.6 db1		
Speed	Low Reading	High Reading
52 MPH	52.3 db1	58.6 db1

At 52 MPH, and 1/10 of a mile from the source, the noise of a vehicle on an EVOC track was only 7 db1 higher than the ambient noise level. Sirens will not be permitted during EVOC training.

Q Are there plans to have "skid cars " at the training center?

Skid cars are platforms whereupon vehicles are placed and used for driver training. The platforms allow drivers to experience how vehicles perform at higher speeds while training at speeds under 25 mph. Skid cars are a source of tire friction noise. The Sheriffs Office will prohibit the use of skid cars at the Camp Bonneville EVOC track.

Q How many cars are on an EVOC track at one lime and how often do they circle the track?

The proposed track for the training center is 1.3 miles. The average speed on the course is 45-50 MPH. Top speed may reach 75 to 85 MPH. A maximum of four vehicles may occupy the track at one time; two instructor vehicles monitoring two student drivers. The student and instructor vehicles are usually within 50 yards of each other. Training segments usually last about 10 minutes. There may be 3 -4 segments per hour of track time. Estimated revolutions in ten minutes would be 6 per vehicle when EVOC training is being conducted.

Q Where will the EVOC track be located?

The initial plan was to locate the EVOC track on the south side of Camp Killpack adjacent to the west gate to Camp Bonneville. However, the alternative plan places all law enforcement activities in the southern portion of Camp Bonneville. It is suggested that the EVOC track encircle the range area and only be used when there is no firearms practice. Relocating the EVOC track as indicated, would place the course approximately 2,000 feet from neighbors and would not be viewed by park patrons. EVOC training, would be prohibited on Saturday and Sunday.

Appendix H

Appendix H - LRA Meetings

09-Aug-95	BOCC Work Session with OEA
15-Nov-95	Reuse Planning Committee
14-Dec-95	Reuse Planning Committee Public Hearing
23-Jan-96	Reuse Planning Committee Public Hearing
17-Feb-96	LRA Orientation Meeting at Camp Bonneville
23-Feb-96	Education Subcommittee
15-Mar-96	Education Subcommittee
18-Mar-96	Firing Ranges Subcommittee
19-Mar-96	Environmental Subcommittee
20-Mar-96	Parks Subcommittee
04-Apr-96	Parks Subcommittee
15-Apr-96	Steering Committee
17-Apr-96	Parks Subcommittee
17-Apr-96	Neighbors Subcommittee
18-Apr-96	Environmental Subcommittee
19-Apr-96	Education Subcommittee
22-Apr-96	Reuse Planning Committee
23-Apr-96	Firing Ranges Subcommittee
29-Apr-96	Firing Ranges Subcommittee
06-May-96	Steering Committee
09-May-96	Parks Subcommittee
14-May-96	Neighbors Subcommittee
16-May-96	Firing Ranges Subcommittee
21-May-96	Finance Subcommittee
22-May-96	Education Subcommittee
06-Jun-96	Finance Subcommittee
10-Jun-96	Steering Committee
11-Jun-96	Neighbors Subcommittee
13-Jun-96	Environmental Subcommittee
19-Jun-96	Reuse Planning Committee
26-Jun-96	Steering Committee
13-Jan-97	Reuse Planning Committee
27-Jan-97	Steering Committee
31-Mar-97	Firing Ranges Subcommittee
09-Apr-97	Firing Ranges Subcommittee
11-Apr-97	Firing Ranges Subcommittee
15-Apr-97	Firing Ranges Subcommittee
21-Apr-97	Steering Committee
29-Apr-97	Neighbors Subcommittee
29-Apr-97	Firing Ranges Subcommittee

08-May-97	Firing Ranges Subcommittee
21-May-97	Environmental Subcommittee
10-June-97	Environmental & Neighbors Subcommittees
23-June-97	Firing Ranges Subcommittee
17-Jul-97	Reuse Planning & Steering Committees
23-Jul-97	Environmental & Neighbors Subcommittees
28-Jul-97	Parks Subcommittee
07-Aug-97	Finance Subcommittee
11-Aug-97	Steering Committee
02-Sep-97	Finance Subcommittee
03-Sep-97	Environmental Subcommittee
08-Sep-97	Neighbors Subcommittee
15-Sep-97	Neighbors Subcommittee
17-Sep-97	Environmental Subcommittee
18-Sep-97	Education Subcommittee
26-Sep-97	Parks Subcommittee
29-Sep-97	Neighbors Subcommittee
01-Oct-97	Environmental Subcommittee
02-Oct-97	Finance Subcommittee
13-Oct-97	Steering Committee
29-Oct-97	Finance Subcommittee
19-Nov-97	Steering Committee
22-Nov-97	Firing Ranges Subcommittee
24-Nov-97	Finance Subcommittee
3-Dec-97	Firing Ranges Subcommittee
11-Dec-97	Finance Subcommittee
18-Dec-97	Parks Subcommittee
6-Jan-98	Steering Committee
8-Jan-98	Firing Ranges Subcommittee
28-Jan-98	Reuse Planning & Steering Committees
2-Feb-98	Reuse Planning Committee Public Hearing
18-Feb-98	Reuse Planning Committee Public Hearing
24-Feb-98	Reuse Planning & Steering Committees
18-Mar-98	Reuse Planning Committee
26-Mar-98	Reuse Planning Committee
15-Apr-98	BOCC Work Session
7-May-98	BOCC Public Hearing
14-May-98	BOCC Public Hearing Follow-up Meeting
16-Sep-98	BOCC Work Session